

Y3.P19/2:1/1992




PANAMA CANAL COMMISSION

ANNUAL REPORT

•

FISCAL YEAR ENDED SEPTEMBER 30, 1992

processed
negative
renew
1032349



Digitized by the Internet Archive
in 2009 with funding from
University of Florida, George A. Smathers Libraries

PANAMA CANAL COMMISSION

**Balboa, Republic of Panama
OFFICE OF THE ADMINISTRATOR**

FROM THE ADMINISTRATOR

It is a pleasure to submit the annual report of the Panama Canal Commission for Fiscal Year 1992. This marks the thirteenth year of successful operation under the Panama Canal Treaty. The Canal organization also celebrated the seventy-eighth anniversary of the opening of the waterway.

This year most major elements of Canal traffic and tolls revenue registered slight declines from prior year levels, primarily due to a return to more normal trade patterns following the end of the Persian Gulf crisis, and the economic slowdown affecting the United States and Japan. Oceangoing commercial transits declined by one percent and average ship size fell, resulting in a 1.5 percent drop in Panama Canal net tonnage. Correspondingly, tolls revenue declined 1.6 percent to \$368.7 million from the \$374.6 million collected in the prior year. Although the average size of transiting vessels in terms of Panama Canal net tonnage declined, transits by vessels in the 100-foot beam and over category, the largest ships the Canal can accommodate, increased to a record 3,013, or nearly 24 percent of total oceangoing transits. Average Canal Waters Time for transiting vessels remained below the agency's 24 hour standard, at 22.1 hours.

Significant investments continued to be made in Canal maintenance, modernization and improvement programs. These included the near completion of the Pacific entrance widening program for improved navigational safety; accomplishment of a four-phase overhaul of rising stem and cylindrical valves at Miraflores Locks; final installation of highly

durable flat fenders at all locks; initiation of dry excavation, under contract, in connection with the major multi-phase program to widen Gaillard Cut; major overhaul of the floating crane Hercules and the dipper dredge Christensen; and acquisition of three new 53-foot aluminum hull launches.

In the spirit of the Panama Canal treaty, advances were also made in the development and placement of Panamanian personnel at all levels of the agency. Of notable importance has been the ongoing training of Panamanian Canal pilots who by year-end numbered 100, or 43 percent of the pilot force. Overall, Panamanians comprise nearly 88 percent of the Canal's total permanent work force.

I wish to commend all Canal employees for their praiseworthy performance. Their commitment and dedication have been exemplary and will unquestionably contribute to the future success of the organization and the continued confidence of world shipping using the waterway.

A handwritten signature in dark ink, consisting of a series of loops and a long horizontal stroke extending to the right.

GILBERTO GUARDIA F.
Administrator

TABLE OF CONTENTS

PANAMA CANAL COMMISSION

	<i>Page</i>
ORGANIZATION CHART	vi
INTRODUCTION	
ORGANIZATION	1
THE CANAL	1
TOLL RATES	2
BOARD OF DIRECTORS	3
OFFICIALS IN THE REPUBLIC OF PANAMA	3
OFFICIALS IN WASHINGTON, D.C.	3
CHAPTER I—CANAL TRAFFIC	
CANAL TRAFFIC	5
COMPARATIVE HIGHLIGHTS OF OPERATIONS	6
COMMODITIES AND TRADE ROUTES	7
CHAPTER II—CANAL OPERATIONS	
TRANSIT OPERATIONS	15
MAINTENANCE AND CANAL IMPROVEMENT PROGRAMS	17
CHAPTER III—SUPPORTING OPERATIONS	
LOGISTICAL SERVICES	23
FACILITIES MANAGEMENT AND SUPPORT DIVISION	24
MOTOR TRANSPORTATION SERVICES	26
PUBLIC UTILITIES AND ENERGY	27
FIRE PROTECTION	27
CANAL PROTECTION	28
HEALTH AND SAFETY	28
CHAPTER IV—ADMINISTRATION AND STAFF	
PERSONNEL FORCE EMPLOYED AND PAYROLL	31
EQUAL OPPORTUNITY PROGRAM	31
PUBLIC AFFAIRS	32
OMBUDSMAN	33
INDUSTRIAL RELATIONS	33
GENERAL COUNSEL	35
CHAPTER V—FINANCIAL REPORT	
FINANCIAL STATEMENTS	37
RESULTS OF OPERATIONS	37
CAPITAL EXPENDITURES	37

CONTENTS

Financial Tables

	<i>Page</i>
TABLE 1.—Statement of Financial Position	38
TABLE 2.—Statement of Operations	40
TABLE 3.—Statement of Changes in the Investment of the United States Government	41
TABLE 4.—Statement of Cash Flows	42
Notes to Financial Statements	43

CHAPTER VI—STATISTICAL TABLES

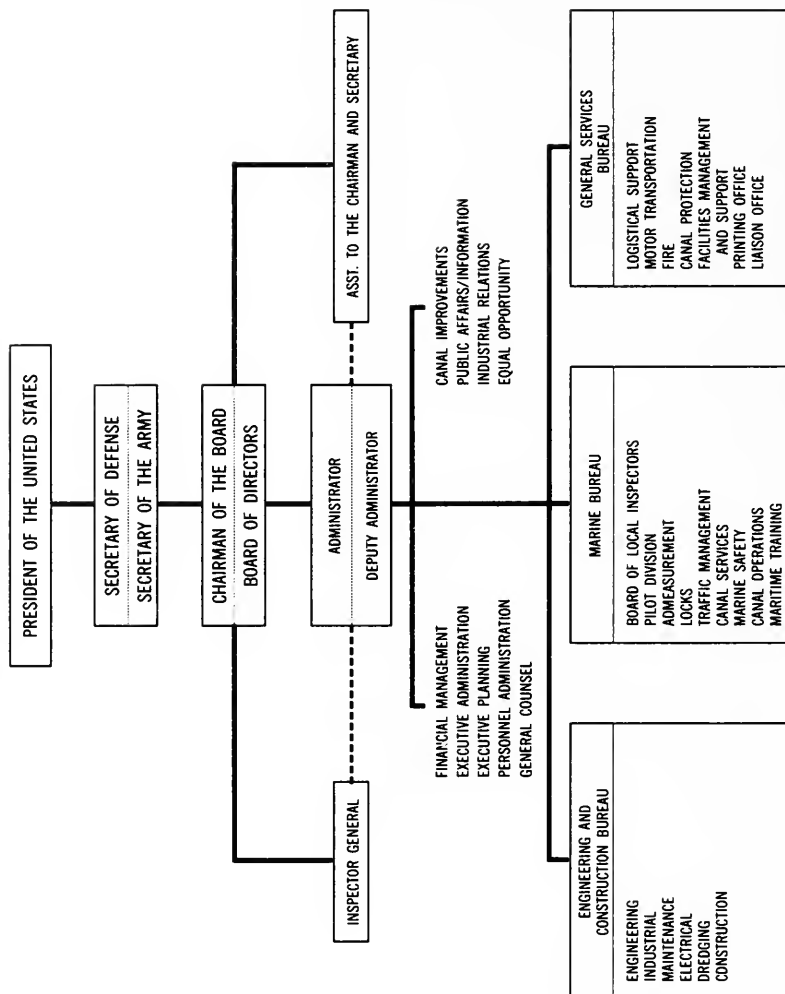
Shipping Statistics

TABLE 1.—Panama Canal Traffic—Fiscal Years 1983 through 1992	50
TABLE 2.—Oceangoing Commercial Traffic by Months—Fiscal Years 1992 and 1991	52
TABLE 3.—Canal Traffic by Flag of Vessel—Fiscal Year 1992	53
TABLE 4.—Classification of Canal Traffic by Type of Vessel—Fiscal Year 1992	56
TABLE 5.—Laden and Ballast Traffic by Flag of Vessel—Fiscal Year 1992.....	60
TABLE 6.—Segregation of Transits by Registered Gross Tonnage—Fiscal Year 1992	62
TABLE 7.—Principal Commodities Shipped through Canal by Fiscal Years 1990 through 1992	66
TABLE 8.—Origin and Destination of Commercial Cargo through the Panama Canal from Atlantic to Pacific during Fiscal Year 1992 Segregated by Countries in Principal Trade Routes	70
TABLE 9.—Origin and Destination of Commercial Cargo through the Panama Canal from Pacific to Atlantic during Fiscal Year 1992 Segregated by Countries in Principal Trade Routes	76
TABLE 10.—Important Commodity Shipments over Principal Trade Routes— Atlantic to Pacific—Fiscal Year 1992	84
TABLE 11.—Important Commodity Shipments over Principal Trade Routes— Pacific to Atlantic—Fiscal Year 1992	117
TABLE 12.—Principal Canal Commodities by Direction—Fiscal Year 1992	149

Other Statistics

TABLE 13.—Water Supply and Usage	151
TABLE 14.—Dredging Operations	151
TABLE 15.—Electrical Power Generated	152
TABLE 16.—Fire Division Statistics	152

PANAMA CANAL COMMISSION



INTRODUCTION

ORGANIZATION

The Panama Canal Commission is an agency of the Executive Branch of the United States Government, provided for by the Panama Canal Treaty of 1977, and established by the Panama Canal Act of 1979 (93 Stat. 452; 22 U.S.C. 3601 et seq), enacted September 27, 1979. The authority of the President of the United States with respect to the Commission is exercised through the Secretary of Defense and the Secretary of the Army. The Commission is supervised by a nine-member Board. Five members are nationals of the United States appointed by the President with the advice and consent of the Senate. Four members are nationals of the Republic of Panama who are proposed by the Republic of Panama for appointment by the President.

The Commission was established to carry out the responsibilities of the United States with respect to the Panama Canal under the Panama Canal Treaty of 1977. In fulfilling these obligations, the Commission manages, operates, and maintains the Canal, its complementary works, installations, and equipment, and provides for the orderly transit of vessels through the Canal. The Commission will perform these functions until the treaty terminates on December 31, 1999, at which time the Republic of Panama will assume full responsibility for the Canal.

The operation of the waterway is conducted on a self-financing basis. The Commission is expected to recover through tolls and other revenues all costs of operating and maintaining the Canal, including interest, depreciation, capital for plant replacement, expansion and improvements, and payments to the Republic of Panama for public services and annuities, in accordance with paragraph 5 of Article III and paragraphs 4(a) and (b) of Article XIII, respectively, of the Panama Canal Treaty of 1977. Revenues from tolls and all other sources are deposited in the U.S. Treasury in an account known as the Panama Canal Revolving Fund. The resources in this fund are available for continuous use and serve to finance Canal operating and capital programs which are reviewed annually by the Congress.

THE CANAL

The Panama Canal is a lock-type canal approximately 51 miles long from deep water to deep water. The minimum width of the navigable channel is

500 feet. Navigable channel depth can vary according to the amount of water available in Canal storage areas; however, the normal permissible transit draft is 39 feet 6 inches tropical fresh water.

Vessels transiting the Canal are raised in three steps to the level of Gatun Lake, the principal source of Canal water, then lowered to sea level again in three steps. The three sets of Canal locks are paired so as to permit simultaneous lockage of two vessels in the same or opposite direction.

Since August 15, 1914, the official date of its opening, the Panama Canal has been serving world trade. Through this fiscal year, a total of 745,932 vessels of all types have transited with 631,429 or 84.6 percent of the total being of the oceangoing commercial class.

TOLL RATES

Toll rates during FY 1992 were: (a) on merchant vessels, Army and Navy transports, hospital ships, supply ships, and yachts, when carrying passengers or cargo, \$2.01 per net vessel ton of 100 cubic feet of actual earning capacity, as determined in accordance with the "Rules of Measurement of Vessels for the Panama Canal;" (b) on such vessels in ballast, without passengers or cargo, \$1.60 per net vessel ton; and (c) on other floating craft, \$1.12 per ton of displacement. These rates have been in effect since October 1, 1989.

A 9.9 percent increase in toll rates was approved to take effect October 1, 1992.

By treaty, the United States continues to provide to Colombia free transit through the Canal of its troops, materials of war, and ships of war.

BOARD OF DIRECTORS

Ending Fiscal Year 1992

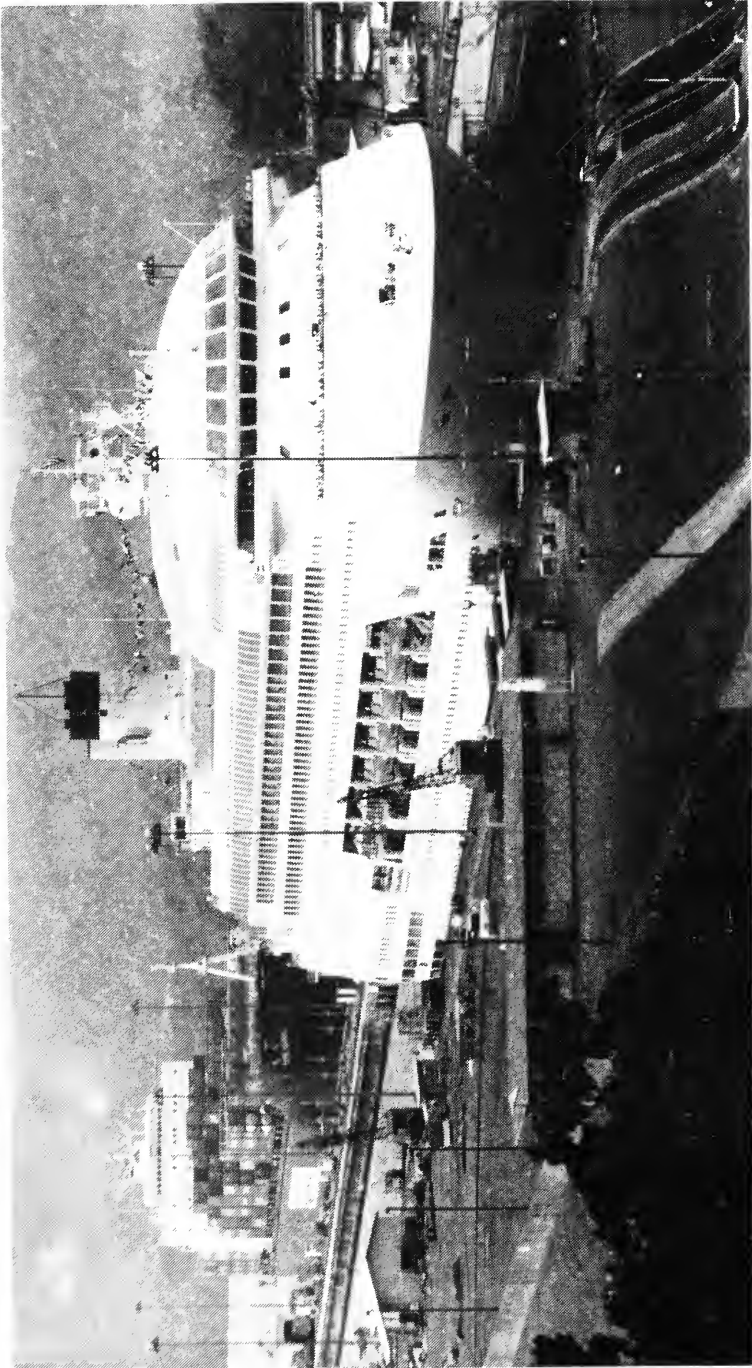
- | | |
|---|--|
| Honorable MICHAEL P. W. STONE
<i>Chairman, Board of Directors</i>
<i>Panama Canal Commission</i>
<i>Washington, D.C.</i> | Honorable ROBERT R. MCMILLAN
<i>Garden City, New York</i> |
| Honorable CECILIA A. ALEGRE
<i>Panama, Republic of Panama</i> | Honorable ALFREDO N. RAMIREZ
<i>Panama, Republic of Panama</i> |
| Honorable LUIS A. ANDERSON
<i>Mexico, D.F., Mexico</i> | Honorable WALTER J. SHEA
<i>Annapolis, Maryland</i> |
| Honorable WILLIAM E. CARL
<i>Corpus Christi, Texas</i> | Honorable JOAQUIN J. VALLARINO, Jr.
<i>Panama, Republic of Panama</i> |
| | Honorable JOHN J. DANILOVICH
<i>London, England</i> |

OFFICIALS IN THE REPUBLIC OF PANAMA

- | | |
|---------------------------------------|-------------------------------|
| <i>Administrator</i> | Honorable GILBERTO GUARDIA F. |
| <i>Deputy Administrator</i> | Honorable RAYMOND P. LAVERTY |

OFFICIAL IN WASHINGTON, D.C.

- Assistant to the Chairman and Secretary* MICHAEL RHODE, Jr.



The luxury cruise ship REGAL PRINCESS, registering 63,841 Panama Canal net tons, is visible in the west lane of Miraflores Locks during a southbound transit. The vessel paid a record toll of \$128,320.41 on April 23, 1992. The Panamax-size containership EVER GIVEN can be seen transiting in the east lane. Nearly 160 million long tons of cargo passed through the Panama Canal this fiscal year.

Chapter I

CANAL TRAFFIC

TRAFFIC

Most major elements of Canal traffic and tolls revenue declined slightly in fiscal year 1992 due to a return to more normal traffic patterns, following the end of the Persian Gulf War, and the economic slowdown affecting the U.S. and Japan.

A total of 12,636 oceangoing vessels, or an average of 34.5 daily, transited the waterway, declining 1.0 percent from the 12,763 transits or 35 daily registered in the prior year. Transits by commercial vessels totaled 12,454, 0.9 percent less than the 12,572 transits reached in fiscal year 1991. Oceangoing transits by vessels owned or operated by the U.S. Government declined to 167, falling 3.5 percent from the 173 transits of the previous year. Free Colombian vessels accounted for 15 transits in fiscal year 1992 versus 18 in fiscal year 1991.

A decline was also experienced in the average Panama Canal net tonnage of transiting vessels, although transits by the largest vessels capable of passing through the waterway increased to an all-time high. Transits by vessels with beams of 100 feet and over reached a record 3,013 or 23.8 percent of total oceangoing transits compared with 2,947 and 23.1 percent in fiscal year 1991. Those in the 80-foot beam and over category fell to 5,698 transits or 45.1 percent of total oceangoing transits from 5,825 and 45.6 percent in fiscal year 1991. Average ship size, in terms of Panama Canal net tonnage, declined 0.8 percent to 15,142 tons from 15,260 tons in the prior year.

The decline in transits and average ship size resulted in Panama Canal net tonnage of 190.2 million tons, a 1.5 percent drop from the 193.1 million tons registered in fiscal year 1991. Correspondingly, tolls revenue fell 1.6 percent to \$368.7 million from the \$374.6 million collected in fiscal year 1991.

Total cargo tonnage carried by transiting vessels decreased 2.2 percent to 159.6 million long tons from 163.2 million tons in fiscal year 1991. A number of commodities declined during the year including manufactures of iron and steel, phosphates, and ores and metals.

A two-year summary of the key elements of Canal traffic and tolls revenue is shown in the table below, followed by a more detailed description of cargo movements by trade route.

COMPARATIVE HIGHLIGHTS OF OPERATIONS

	<i>Fiscal Year</i>	
	<i>1992</i>	<i>1991</i>
Oceangoing Transits:		
Commercial	12,454	12,572
U.S. Government	167	173
Free	15	18
Total	<u>12,636</u>	<u>12,763</u>
Daily Average	34.5	35.0
Small Transits:		
Commercial	1,260	1,079
U.S. Government	231	248
Free	21	18
Total	<u>1,512</u>	<u>1,345</u>
Total Cargo:		
Commercial	159,273,868	162,696,423
U.S. Government	341,337	516,130
Free	19	.....
Total	<u>159,615,224</u>	<u>163,212,553</u>
Total Panama Canal Net Tons and Reconstructed Displacement Tonnage	190,203,395	193,101,533
Transit Revenue:		
Commercial Tolls	\$365,853,774	\$372,398,248
U.S. Government Tolls	<u>2,808,731</u>	<u>2,226,489</u>
Tolls Revenue	<u>\$368,662,504</u>	<u>\$374,624,737</u>
Harbor Pilotage, Tug, Launch, and Other Services	\$ 92,439,154	\$ 97,792,243
Total Transit Revenue	<u>\$461,101,658</u>	<u>\$472,416,980</u>

COMMODITIES AND TRADE ROUTES

Fiscal year 1992 was characterized by declines in many commodities traversing the waterway. Commercial cargo dropped 2.1 percent to 159.3 million long tons from 162.7 million long tons in fiscal year 1991. The downturn was driven by a resumption of normal traffic patterns following the end of the Persian Gulf war and to the weakness affecting the U.S. and Japanese economies. Tonnage declines were experienced in manufactures of iron and steel, phosphates, ores and metals, refrigerated products, automobiles, chemicals and petroleum chemicals, minerals and grains. These losses were only partially offset by gains in a few trades such as petroleum products, lumber, coal, and containerized cargo.

Grains, constituting the largest tonnage utilizing the Canal, declined 0.5 percent to 32.7 million long tons from the 32.9 million tons registered during fiscal year 1991. The decline in this commodity group was due to lower corn and wheat exports from the U.S. to the Far East. Corn tonnage was down 4.5 percent to 14.4 million long tons from the 15.0 million long tons of the previous year, primarily due to a drop in corn shipments to Japan. After recovering modestly for three consecutive years, corn tonnage destined for Japan declined 8.9 percent to 10.1 million tons. Wheat, accounting for the second largest tonnage in the group, decreased 4.6 percent to 7.6 million long tons from the 8.0 million tons registered in fiscal year 1991, mainly as a result of lower shipments from the West Coast U.S./Canada to North Africa and from the U.S. East Coast to West Coast South America. The decline offset a modest increase in wheat exports to China, which had been falling for the last two years. Wheat tonnage destined for mainland China from the U.S. via the Canal increased 8.1 percent to 4.2 million tons. Soybeans, the third most important component of the group, rose 14.7 percent to 7.2 million long tons from the 6.3 million tons of fiscal year 1991, sustained mainly by higher volumes of shipments from the U.S. to Japan and South Korea.

An upturn was registered in the petroleum and products commodity group. After falling to about 24.0 million long tons in fiscal year 1991, the commodity group increased 5.0 percent to 25.2 million tons in fiscal year 1992. The improvement registered in the commodity group was mostly fueled by high gains in residual fuel oil, diesel oil, jet fuel and petroleum coke. Those gains, however, were partially reduced by losses in gasoline, kerosene, and liquefied natural gas. Crude oil shipments were up marginally, increasing 0.5 percent from 8.2 million long tons in fiscal year 1991 to 8.3 million tons in fiscal year 1992. Increases in crude oil movements from Mexico and Venezuela to West Coast Central America were offset by declines in oil flows from Ecuador to the U.S. East Coast and West Indies. Ecuadorian oil flows have continued on a downward trend as a result of shifts in that country's export patterns and

limited production levels.

The important container trade rose 3.2 percent from 21.2 million long tons in fiscal year 1991 to a record high of 21.9 million tons in fiscal year 1992. The increase occurred despite the poor performance of the Canal's principal container trade—between the U.S. East Coast and the Far East—which dropped 4.2 percent from prior year levels. Total U.S. containerized imports and exports via the Canal showed a decline, reflecting the effect of the U.S. and Japanese economic slowdowns, combined with the increased impact of the competition exerted by the U.S. intermodal movement. U.S. exports to the Far East through the Canal declined 6.7 percent to 6.1 million tons and imports from the Far East dropped 0.1 percent to 4.8 million tons. Although the container cargo on this route declined, the movement still accounts for over half of the Canal's container tonnage. The U.S. West Coast-Europe route, the second most important route in the container trade, remained flat at 2.7 million tons. The lackluster performance of these main routes contrasted with the gains displayed by most other smaller container routes, particularly the trade to and from West Coast South America. The movement between the U.S. East Coast and West Coast South America increased 29.9 percent to 1.8 million tons and trade between Europe and West Coast South America was up 23.7 percent to 1.4 million tons.

The nitrate, phosphates and potash commodity group, the fourth in importance, dropped 6.3 percent to 13.8 million long tons in fiscal year 1992. A 10.1 percent decrease in phosphates shipments, from 9.5 million long tons to 8.6 million tons, explains most of the group's decline. The downturn was evident in U.S. exports to the Far East and is attributed to a return to more normal trade patterns following the end of the Persian Gulf crisis. The U.S. East Coast - Far East route, the principal phosphate trade lane, showed a 4.9 percent decline to 5.8 million long tons, mainly as a result of a drop in shipments to China, Japan and South Korea. Shipments from the U.S. East Coast to West Coast Mexico were down 82.9 percent to about 100 thousand tons.

The lumber and lumber products commodity group reached record levels for the second consecutive year, increasing 3.5 percent to 9.9 million long tons from 9.5 million tons in fiscal year 1991. Significant gains in pulpwood tonnage account for the high performance of the commodity group. While lumber and lumber products, excluding pulpwood, declined 6.0 percent to 6.1 million tons, pulpwood shipments increased 22.6 percent to a record 3.8 million tons. Flows from the U.S. East Coast to the Far East rose significantly in both segments of the commodity group. Shipments on that route, excluding pulpwood, increased 19.2 percent to 3.1 million tons and pulpwood rose 85.7 percent to 1.3 million tons. West Coast Canada,

which in the past was the major source of lumber and products at the Canal, exhibited a decline for the fourth consecutive year, with shipments to Europe falling 23.6 percent to 1.2 million tons.

A steep decline was observed in the tonnage of ores and metals. The commodity group accounted for 9.6 million long tons, declining 15.9 percent from 11.4 million tons in fiscal year 1991. Both the ores and metals components of the group sustained declines. The poor performance of the ore segment was driven by a decline in shipments of aluminum/bauxite, despite a substantial improvement in copper ore flows. Alumina/bauxite fell 50.3 percent to 0.9 million long tons from 1.9 million tons, with shipments from Oceania to the U.S. East Coast almost disappearing as U.S. imports shifted to Caribbean suppliers. As a result, the ores group declined 12.2 percent to 6.3 million long tons in fiscal year 1992. The metals component of the group dropped 22.2 percent to 3.3 million tons, primarily induced by a decline in scrap metal, which fell 32.1 percent to 1.4 million tons. This downturn in the scrap metal trade was due to lower shipments on the U.S. East Coast - Far East trade, with tonnage destined for South Korea, the main recipient, showing a drop of 28.3 percent to 1.1 million tons.

The coal and coke trade showed an improvement relative to fiscal year 1991 levels, increasing 6.2 percent to 8.9 million tons. The main trade route, consisting of U.S. coal exports to the Far East, displayed an increase of 5.4 percent from 3.7 million long tons in fiscal year 1991 to 3.9 million long tons in fiscal year 1992, with shipments to Japan and Taiwan totaling 1.9 and 2.0 million long tons versus prior year flows of 1.5 and 1.8 million long tons, respectively. In contrast, coal exports exiting Hampton Roads en route to the Far East via the Cape of Good Hope on ships too large to transit the Canal declined from last year's record high of 7.4 million long tons to 6.8 million tons in fiscal year 1992. The second major coal route comprised of Canadian exports to Europe also showed an increase, with shipments up 8.3 percent to 2.6 million tons. Contributing to the overall tonnage gains of the commodity group was a 62.5 increase in coke shipments from the Far East to the U.S. East Coast which reached 1.3 million tons.

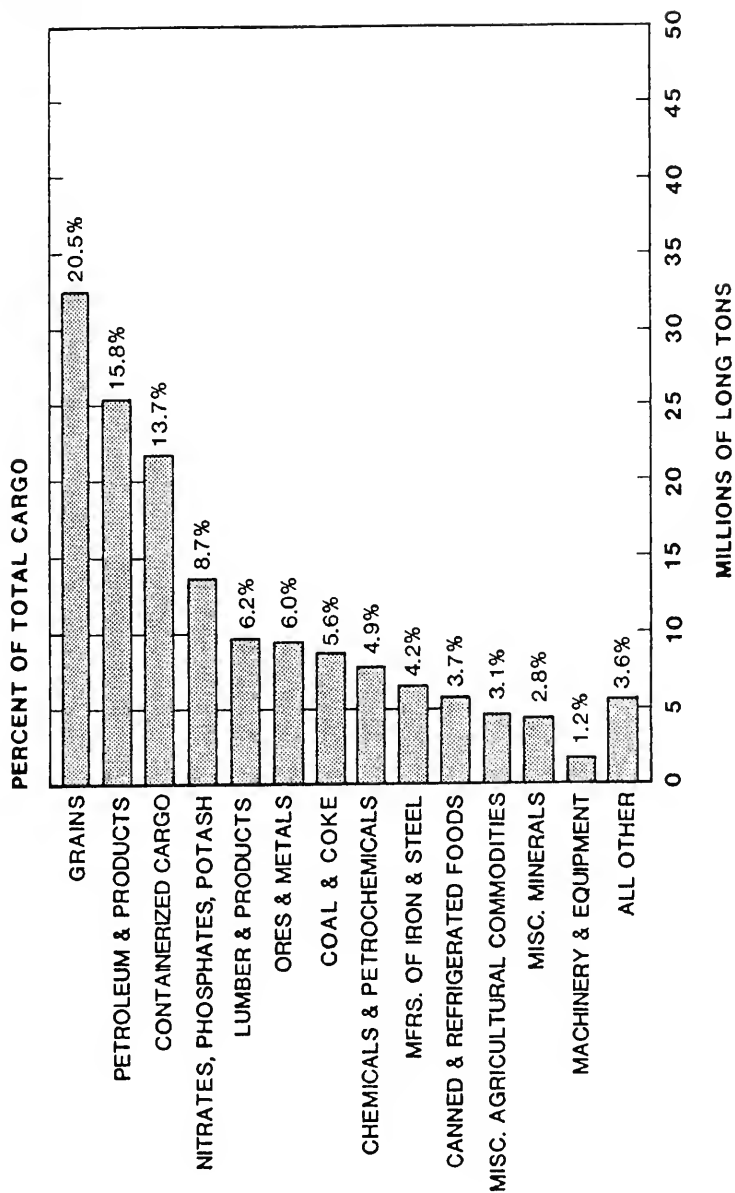
Although tapering off, the downward trend in the automobile trade which began in 1988 continued, with automobile tonnage dropping marginally by 0.9 percent from 1.6 million tons in fiscal year 1991 to 1.5 million long tons in fiscal year 1992. Increases in minor trade routes offset somewhat the continued decline exhibited by the principal automobile shipments, those emanating from Japan to the U.S. East Coast. Japanese automobile imports into the U.S. via the Canal dropped this year another 6.9 percent to 1.0 million tons. This compares with imports of 1.8 million tons in the Canal's automobile peak year of 1987.

A number of other commodity groups, such as refrigerated products, manufactures of iron and steel, chemicals and petrochemicals, other agricultural commodities, and miscellaneous minerals also registered declines during the year. The drop of 4.0 percent sustained by the refrigerated products group was almost entirely due to a drop in fish tonnage moved from the U.S. West Coast and West Coast South America to Europe. Fish shipments were down 40.8 percent, with this loss exceeding the slight gains registered in the bananas and fruits trades. Manufactures of iron and steel registered a substantial decline in fiscal year 1992, falling 19.2 percent to 6.7 million long tons. The decline in this commodity group was particularly evident in the movement from the U.S. East Coast to Asia, which was unusually high in the prior year. Shipments of manufactures of iron and steel on the important Far East to U.S. East Coast route also deteriorated. The downturn in the chemicals and petrochemicals group is explained, in part, by the return to more normal patterns in world trade following the end of the Persian Gulf crisis. The other agricultural commodities group declined 3.2 percent to 5 million tons with the main component, sugar, showing a drop of 9.7 percent. The miscellaneous minerals commodity group decreased 9.1 percent to 4.5 million long tons with sulfur tonnage accounting for a loss of 11.9 percent.

Trade between the Far East and the U.S. East Coast continued to dominate Canal traffic, accounting for 38.5 percent of total commercial cargo passing through the waterway compared with 38.6 percent in fiscal year 1991. Cargo moved on that trade route, however, registered a 2.4 percent decline to 61.3 million long tons from 62.8 million tons in the prior year, reflecting the effect of the recession in the U.S. and Japanese economies.

The following tables show the principal commodity groups moving in oceangoing commercial vessels during fiscal year 1992 and a comparison of the major trade routes in fiscal years 1992 and 1991.

PRINCIPAL COMMODITY GROUPS
TRANSITING THE CANAL
OCEANGOING COMMERCIAL CARGO FY 1992



Major Voyage Trade Routes in Canal Traffic

Trade Route	Fiscal Year						Percent of Increase or (Decrease)
	1992			1991			
	Panama Canal Net Tons	Long Tons Cargo	Panama Canal Net Tons Cargo	Panama Canal Net Tons Cargo	Long Tons Cargo	Panama Canal Net Tons Cargo	
	[In thousands of long tons]						
East Coast United States-Asia	66,080	61,302	67,920	62,822	(2.7%)	(2.4%)	
East Coast United States-West Coast South America	17,088	10,410	17,140	11,257	(0.3%)	(7.5%)	
Round the World	13,889	8,016	14,127	7,948	(1.7%)	0.9%	
Europe-West Coast South America	13,602	8,025	13,983	8,348	(2.7%)	(3.9%)	
Europe-West Coast United States/Canada	12,084	15,040	11,549	15,022	4.6%	0.1%	
East Coast United States-West Coast Central America	6,829	6,396	5,920	5,785	15.4%	10.6%	
Europe-Asia	6,646	4,614	6,672	4,684	(0.4%)	(1.5%)	
East Coast United States/ Canada-Oceania	4,588	5,144	5,215	6,196	(12.0%)	(17.0%)	
United States Intercoastal (including Alaska and Hawaii)	4,552	2,608	4,942	2,031	(7.9%)	28.4%	
South America Intercoastal	4,272	3,956	3,519	3,163	21.4%	25.1%	
West Indies-Asia	3,309	2,334	3,478	2,310	(4.9%)	1.0%	
Europe-West Coast Central America	3,084	1,638	3,204	1,423	(3.7%)	15.1%	
Subtotal.....	156,023	129,483	157,669	130,989	(1.0%)	(1.1%)	
All other routes	32,493	29,790	34,118	31,707	(4.8%)	(6.0%)	
Total	188,516	159,273	191,787	162,696	(1.7%)	(2.1%)	



Contract workers look on as the Commission's dipper dredge **RIALTO M. CHRISTENSEN** (foreground) and Floating Caisson #2 (background) undergo one phase of a major overhaul at the Balboa drydock. The other phase of the overhaul work was performed at the Industrial Division at Mt. Hope.

Chapter II

CANAL OPERATIONS

Canal operations are comprised of Transit Operations, Maintenance, and Related Canal Projects. The various functions are divided among a number of operating bureaus within the Canal agency.

TRANSIT OPERATIONS

Daily average transits by oceangoing vessels averaged 34.5 per day during fiscal year 1992. Average time in Canal waters increased slightly from 22.0 hours in fiscal year 1991 to 22.1 hours in fiscal year 1992.

The following table indicates the number of large oceangoing vessels (by beam and length) that transited the Canal during the last 13 years:

<i>Fiscal Year</i>	Vessels of 600-foot length and over	Percent of total oceangoing transits	Vessels of 80-foot beam and over	Percent of total oceangoing transits
1992	3,982	31.5	5,695	45.1
1991	4,008	31.4	5,825	45.6
1990	3,772	31.3	5,545	46.0
1989	3,913	32.4	5,734	47.5
1988	4,047	32.9	6,027	48.9
1987	4,005	32.5	5,902	48.0
1986	4,131	34.4	5,898	49.1
1985	3,862	33.1	5,514	47.3
1984	3,865	33.9	5,496	48.3
1983	4,157	35.1	5,869	49.5
1982	5,534	39.5	7,226	51.1
1981	4,855	34.7	6,364	45.5
1980	4,598	33.8	6,089	44.7

The number of vessels transiting at more than 36-foot draft decreased 4.4%: 1,853 vessels during fiscal year 1992 compared to 1,938 during fiscal year 1991. The maximum allowable draft remained at 39 feet 6 inches during the entire fiscal year.

Total jobs performed by Commission tugs decreased from 40,580 in fiscal year 1991 to 38,134 in fiscal year 1992.



Following approval by the Commission's Board of Directors, work was initiated in January 1992 to widen Gaillard Cut. This multi-phase program will be performed over a number of years utilizing contractors to complete the dry excavation and the Commission will use in-house resources to conduct wet excavation.

	<i>Fiscal Year</i>	
	<i>1992</i>	<i>1991</i>
Oceangoing transits	12,636	12,763
Tug jobs:		
Balboa	29,159	28,332
Cristobal	8,975	12,248
Tug operating hours	60,604	62,535

MAINTENANCE AND CANAL IMPROVEMENT PROGRAMS

Planned maintenance, scheduled overhauls, and general improvements to the Canal and appurtenant structures were accomplished throughout the year as programmed. The various divisions and units of the Engineering and Construction Bureau are responsible for the overall physical maintenance and improvement of the waterway. The Marine Bureau operates and maintains the locks and related facilities.

Channel Improvements: Channel dredging activities during fiscal year 1992 focused on the Pacific Entrance Channel Widening, where 2,138,465 cubic yards of material were removed by the suction dredge MINDI. A total of 9,482,000 cubic yards of material has been dredged to-date on the widening project which began in September 1988 and is scheduled to be completed in 1993. The MINDI also performed maintenance dredging of Miraflores Lake and at the Pacific Entrance, alongside the U.S. Navy piers at Rodman. Additionally, taking advantage of the temporary presence of a commercial dredge at the Pacific entrance to the Canal, a contract was awarded to dredge a flared area west of the west prism line at the beginning of the Pacific entrance to the canal. The dredged area will provide a greater degree of safety to vessels entering and exiting the southernmost tip of the channel. The contract also required that dredging be performed at the Balboa ship holding area west of pier 18.

Two new navigation range towers with lights were purchased and installed. The towers, one located off-shore and the other on-shore along the newly widened south west end of Balboa Reach, will provide proper target alignment at the widened Pacific entrance.

Locks: A four-phase valve overhaul of Miraflores Locks was conducted during fiscal year 1992, which included the conversion of all rising stem valves from "roller train" type to "sliding bearing surface," repairs to 19 cylindrical valves and replacement of 21 others.

At Gatun Locks, a turntable was installed and adjacent track work performed. The project was completed 64 days ahead of schedule. The turntable at Pedro Miguel north approach is awaiting final pit design and will be the last of five units to complete the turntable replacement program.

The Maintenance Division completed installation of new forebay/tail-bay sandwich type fenders at all three locks. The Locks Fenders System Committee (LFSC) evaluated 1,200 feet of experimental approach wall sandwich type fenders installed at Pedro Miguel southeast approach wall

and has recommended further improvements to incorporate more energy absorption capabilities.

A project is underway to install a new marine foam-type fire protection system at Pedro Miguel Locks. Scheduled for completion in fiscal year 1993, this system will be similar to the one installed at Miraflores Locks.

The replacement of the loadbreaking switches and power feed cable at Gatun Locks is presently in progress. This phase of the project should be completed during fiscal year 1993. Subsequent phases of the project include similar work at Miraflores and Pedro Miguel Locks. The new switches are an improved type that allow switching under a load, thus improving lockout operation with an added margin of safety.

At all locks, the 565 CFM and 1200 CFM air compressors are being replaced with 1500 CFM oil free units. The first three new air compressors, one for each set of locks, have been delivered to Pedro Miguel Locks. Installation should be completed by the middle of fiscal year 1993.

Gaillard Cut Widening: Preparatory work was initiated early in the fiscal year to provide the design, drawings, specifications, and estimates necessary to solicit bids on the dry excavation work to be conducted at the north end of the west bank. Individual bids were solicited and contracts awarded on 5 separate projects to remove approximately 1,140,300 cubic meters (1,482,400 cubic yards) of dry material.

The subaqueous portion of the Cut widening program is scheduled to be performed by the Dredging Division beginning in the latter part of fiscal year 1994.

Bank Improvements: A section of canal bank at the northwest wingwall of Miraflores Locks was protected from erosion by construction, under contract, of an anchored sheet pile.

Following earth movement and drainage improvement work at Cocoli Hill and along East Culebra and East Lirio reaches, reforestation of these areas was performed under contract with the planting of approximately 16,000 fast-growing acacia mangium trees.

Pilot, Tug and Launch Facilities: A new, modern pilot reporting station was inaugurated in Diablo on August 12, 1992. It is equipped with comfortable waiting rooms and computer terminals which display ship arrival and departure times, so that pilots can monitor their schedules.

Construction of a tug landing at Gamboa was completed under contract on June 11, 1992. A tug and launch landing was also constructed under contract at Paraiso and completed August 25, 1992.

A sheltered work area at the Launch Repair Facility in the Industrial Division was built. The sheltered area consists of three finger piers capable of docking six launches and provides all utilities necessary to accomplish 24-hour launch repair operations.

Dams, Spillways and Power Stations: Six of the fourteen spillway gates at Gatun Dam were completely rehabilitated and overhauled at the Industrial Division in Mt. Hope. Additionally, two 10-foot diameter and 36-foot high stacks were fabricated at the Industrial Division and installed at the Miraflores power generating station.

Communications: A multi-year program to upgrade telecommunications service Commission-wide was concluded in May with the placement in service of a new telephone switch at Gamboa. Together with the previously installed switches at Balboa, Miraflores, and Gatun, the Commission now has a modern computerized digital telecommunications network throughout the agency. The improvements include state-of-the-art business communications features, uniform dialing and signalling, full compatibility with the Republic of Panama's telephone system, adherence with international standards, and integrated voice-data transmission capabilities.

Floating Equipment Maintenance: Overhaul of the floating crane Hercules was initiated at the Mt. Hope, Industrial Division complex. Primary work included refurbishing crew quarters, installation of a bilge and ballast system, installing a new auxiliary generating system composed of two 125 KW generators, complete change of fendering from wood to synthetic rubber units, mechanical and structural work on the main boom and gears which included rebuilding the boom rotation drive mechanism, refurbishing and repairing the electrical system, and complete painting and testing.

The dipper dredge Christensen was overhauled in two phases beginning with work at the Balboa Drydock. The work included repairs to the hull and spud guides, refurbishment of the dredge's sea chest, valves, and the engine bilge and fuel tanks. The second phase of the overhaul was performed at the Industrial Division and consisted of installing new fenders and accomplishing repair work to the hull and other areas above the waterline.

The drill barge THOR was towed to Mt. Hope in June to receive its scheduled major overhaul. A new diesel-driven generator system for the drill-barge was purchased and is being installed. Overhaul work should be completed during fiscal year 1993.

Rehabilitation of the tug GUIA was completed. Satisfactory sea trials were conducted and the tug was returned to service in November.

Major overhauls were conducted at the Industrial Division's synchrolift facility on the tugs ALIANZA, GAMBOA, MORROW, ESPERANZA, and PARFITT, and repairs were made to the PAZ. Preventive maintenance was performed on the tugs BURGESS, McAULIFFE, AMISTAD, GUIA, PROGRESO, ALIANZA, MEHAFFEY, and SCHLEY during the year.

Floating Caisson #2 was repaired and refurbished at the Mt. Hope synchrolift facility by the Industrial Division. The caisson was afterwards

towed to the Balboa Drydock for repair and painting of the hull below the waterline by the contractor.

Acquisitions and Contracts: Three new 53-foot aluminum twin screw pilot/linehandling launches, the SIERRA, SWORDFISH and SABALO, were received on August 29, 1992. Each has a capacity for 34 passengers.

A contract was awarded to expand the existing Partial Task Simulator to a Full Mission Bridge Simulator. This new equipment will improve Canal pilot training capabilities.

A new Grit Blasting Facility at the Industrial Division, Mt. Hope, was inaugurated at the beginning of the fiscal year. The structure consists of three environmentally-controlled chambers for blasting, painting, and curing. This facility will enable top-of-the-line service to be provided and will significantly reduce airborne grit particle dispersion. Construction of the facility was performed by a contractor.

Cleaning, painting, and minor structural modifications to various railroad track span towers and replacement of associated insulators, hardware, and conductors on sections of the 44 KV line was completed under contract.

During the year, the Engineering and Construction Bureau awarded 141 construction type contracts for a total of approximately \$29 million.



A contract was awarded to upgrade the former floating wooden landing at the Paraiso tug and launch facility. Construction work can be seen in progress (upper photo) as the Panamax-size vessel BELFOREST transits in the background, heavily laden with lumber products. The new permanent concrete facility (lower photo), which was completed on August 25, 1992, requires little maintenance.

Chapter III

SUPPORTING OPERATIONS

Supporting units of the Panama Canal Commission provided essential support services for the operation and maintenance of the waterway and the Agency's facilities, as well as to other U.S. agencies on the Isthmus and to employees and their dependents. These operations included logistical services, community services, sanitation and grounds management, transportation services, public utilities, fire protection, security, health and safety and other employee services.

LOGISTICAL SERVICES

The Logistical Support Division provided centralized procurement, inventory management, distribution, contract administration and supply and property disposal support to Panama Canal operations. A total of \$82.5 million in goods and services were procured during fiscal year 1992, including \$29.3 million from sources in Panama. This includes \$5.5 million for light diesel fuel oil purchased from Esso Standard Oil, S.A. Bunker "C" oil purchases for thermoelectric power generation totalled \$10.4 million (one purchase from a U.S. firm and two from Refinería Panamá). Major contracting obligations included \$2,990,440 for catastrophic insurance coverage; \$1,186,550 for power transformers; \$996,000 for rewinding and uprating hydroelectric generators; \$973,660 for trash rakes/racks at generating stations; \$900,717 for fire trucks; \$862,533 for bridge (ship) simulator upgrade; \$628,800 for fender parts; \$580,217 for centralized security patrol; \$529,600 for drilling equipment; \$513,470 for a 40-ton hydraulic crane; and \$499,896 for a pilot/linehandler launch.

Approximately \$21.1 million in inventory items were issued for Commission use and \$20.6 million were obligated for new inventory purchases during the year. A total inventory of 36,338 line items with a cost value of \$30.8 million was on hand at year end.

Activities of the Excess Disposal Unit included no-cost transfers to other U.S. Government agencies of excess equipment having an original acquisition value of \$3.7 million. Surplus property sold to the Government

of Panama at current fair market value amounted to approximately \$5,022. Sales to others totalled \$340,635.

The New Orleans Branch in Louisiana expedited urgent purchases and coordinated all Commission cargo shipments from the United States to Panama. A total of 18,315 measurement tons of containerized and breakbulk cargo were shipped from Louisiana ports to the Republic of Panama.

FACILITIES MANAGEMENT AND SUPPORT DIVISION

During fiscal year 1992, the Community Services and Sanitation and Grounds Divisions were merged into one, the Facilities Management and Support Division. This division managed Commission housing, Commission-owned buildings, the Furniture Pool, the Technical Resources Center, the Employee Fitness Program and the sanitation and grounds activities.

Sanitation operations provided comprehensive environmental health support to Commission employees and Panama Canal operating units. This responsibility extended to protecting the work force from epidemic tropical diseases, such as dengue, malaria and encephalitis, which are transmitted by mosquitoes and other insect and arthropod vectors. Over the past several years, mosquito surveillance and control measures have intensified since the Panama City metropolitan area became heavily infested with the dengue fever vector. No dengue cases have occurred yet, but the threat of a widespread epidemic of this disease continues to exist. In fiscal year 1992, only 28 active breeding sites were found and controlled within Commission housing areas, a three-fold decrease compared to last year's findings.

The Entomology Unit, in coordination with the Sanitation Office, maintains an extensive surveillance network to monitor mosquito populations throughout the Canal area. While most routine mosquito control measures involve mainly hand labor to maintain some 130 miles of drainage ditches, in early fiscal year 1992 a sophisticated tide control structure was installed at the Farfan River spillway. This system of four counter-balanced metal gates blocks the influx of seawater into the marsh, yet allows accumulated fresh water from rainfall to flow out of the marsh into the bay. This has brought about long-term nonchemical control of sand flies and has greatly reduced the emergence of the migratory salt marsh mosquitoes.

The program to control Africanized "killer bees" continues to function well by eliminating all Africanized bee colonies reported to the Division. Due to very dry conditions favorable to bee reproduction, the division workload to control these insects increased from 202 calls in fiscal year 1991 to 289 control operations in fiscal year 1992, including ten swarms aboard transiting vessels.

Atlantic and Pacific Commission sanitary landfills continue to provide for disposal of solid wastes for the Canal area, including that from U.S. military installations and Government contractors. The net refuse disposal workload increased by 10 percent this fiscal year, while refuse tonnage from U.S. military posts fell by 2 percent compared to figures for the previous fiscal year.

Grounds agronomists provided technical support for the long-term Gaillard Cut reforestation project, managed by the Engineering Division. The 64,000 fast-growing Acacia and Gmelina trees have continued to be effective in stabilizing several slopes along the Canal where massive landslides had occurred in the past. Wildfire suppression through the clearing of weeds and other dry vegetation in addition to the application of fire retardant chemicals through the coordinated efforts of both grounds crews and Commission fire fighters, did much to reduce severe fire damage to these tree plantations over the past two years.

The Technical Resources Center provided responses to 3,330 mission-supported information and research questions to units of the Commission and other U.S. agencies. It also continued to maintain a collection of library and tridimensional materials relating to the history and operation of the Panama Canal. This unit supported the professional development of the pilot understudies and other employees through workshops, scanning 6,604 technical journals, providing 2,434 current awareness services, as well as bibliographies and conference information.

The buildings management activity maintained and operated Commission buildings and structures (not specifically assigned to other Commission units) and a centralized custodial service. As an ongoing project, this unit continued to modify facilities to comply with OSHA standards for handicapped personnel and increased physical security of buildings. During the year, Pier 16, Cristobal, with appurtenances, fuel and utility lines, and the Commission's portion of Gatun Tank Farm including nine fuel storage tanks with the fuel and utility lines connecting from the tank farm to Pier 16, Cristobal, were transferred to the Government of Panama. The branch also operates the Commission's furniture pool, which coordinates the procurement of new office furniture and related furniture requirements such as inventory, transportation, storage, maintenance and repair.

The housing portion of the operation allocated its resources to managing, maintaining, repairing, performing preventive maintenance, bringing up to standard the safety and security aspects of the quarters inventory. On February 28, 1992, a Letter of Authorization was issued granting Panama's Ministry of Housing (MIVI) the control and administration of four housing units (halves of duplexes) located in Diablo at no cost to the Government of Panama until the entire structure is formally transferred to Panama.

Under the multi-year housing management plan to transfer housing units to the Government of Panama (GOP), the division identified 73 housing units in the townsites of Balboa, Diablo, Gamboa and Margarita for release by the end of calendar year 1992. Seven of these units have already been released. Housing inventory was reduced by 140 units (137 transferred to Panama and 3 demolished because they were beyond economical repair), decreasing the total inventory from 1,490 to 1,350 units. This represents 31 percent of the inventory of approximately 4,300 units owned by the Panama Canal Company prior to entry into force of the Panama Canal Treaty in 1979. A total of 69.26 percent of those units have transferred to the GOP in 13 years since treaty implementation.

The preparation of housing units for transfer under established safe, sanitary and secure guidelines is now being performed by contract forces. This preparation, which was formerly performed by hired labor, should result in savings for the Commission.

The Employee Fitness Branch administered a variety of duty-related as well as off-duty fitness programs and recreational facilities. The branch operates 12 facilities throughout the Canal area. Regular year-round activities are swimming, weight training, aerobics exercises (regular, low-impact) and water exercises, racquetball and jogging. Seasonal sports are tennis, softball, volleyball, soccer and basketball. There are certain programs specially created for Commission employees' dependents such as youth baseball, swimming classes, youth soccer, archery, gymnastics, ping-pong, basketball, etc. Training was provided to Commission units in rescue, water safety, advanced life saving and survival floating. The branch continues to be responsible for certifying swimming proficiency of job applicants and employees.

MOTOR TRANSPORTATION SERVICES

The Motor Transportation Division operated and maintained a consolidated motor pool of 939 vehicles designed to meet the vehicular transportation requirements of the Commission. The vehicle fleet in fiscal year 1992 included 643 trucks of various types, 208 passenger-carrying vehicles, 41 special purpose vehicles and 47 special equipment. Fleet mileage decreased from 8,032,112 last year to 7,716,454 this year. Fully equipped shops, including a tire retreading facility, light and heavy duty repair shops, and specialized transmission, diesel and machine shops provide facilities for overhauls, preventive maintenance and repairs to the Motor Transportation Division fleet and equipment of other Commission units. The vehicle inspection facilities located within the Motor Transportation Division were used again during the year for inspection of POVs belonging to Department of Defense and Commission personnel. These facilities were also used for the inspection of all Commission

vehicles. The Transportation Section is staffed with a total of 145 motor vehicle operators in both districts, and manages a motor pool of 383 vehicles, consisting of 178 general pool, 102 replacement and 103 special purpose vehicles and equipment. This section performed an average of 4,618 monthly transportation trips during fiscal year 1992 for services ranging from transisthmian pilot trips to heavy equipment operation.

PUBLIC UTILITIES AND ENERGY

Panama Canal Commission facilities include electric power generation and distribution systems, communication systems, water purification and distribution systems, and a central chilled water air conditioning and distribution system for certain public buildings in the Pacific area.

Total Canal area energy demand during fiscal year 1992 was 538 gigawatt hours, a 0.9 percent increase from the 533 gigawatts used last year. The peak hourly demand of 85.53 megawatts, reached on April 8, 1992, shows a slight increase from the 85.1 megawatts peak reached in fiscal year 1991. Electrical power consumed for Commission operations was 65.6 gigawatt hours, 2.5 percent below the previous year. Gasoline and petroleum distillate fuel usage by the Commission during fiscal year 1992 (excluding fuel for power generation), was 5.1 million gallons, 21.4 percent higher than in fiscal year 1991. Combined fuel and electrical energy consumption by the Commission, calculated in btu's, also showed an overall increase, 14.3 percent, in comparison with fiscal year 1991.

The two water treatment and distribution systems operated by the Commission provide potable water for the Canal area including all potable water for the Commission and the U.S. military. The Pacific side system also serves portions of Panama City and suburban areas while the Atlantic side system serves the Colon metropolitan area. During fiscal year 1992, both systems supplied 3.32 billion cubic feet of potable water to consumers. Water supplied to the Republic of Panama averaged approximately 56.0 million gallons (7.5 million cubic feet) per day.

FIRE PROTECTION

The Panama Canal Commission Fire Division and the Bomberos of the Republic of Panama, in accordance with the Panama Canal Treaty of 1977, are responsible for providing fire protection, fire fighting and emergency rescue services in Canal operating areas, defense sites, and military areas of coordination, including shipboard fire fighting on all vessels in Canal area waters.

Commission responses for fiscal year 1992 totaled 7,707 compared to 6,519 for fiscal year 1991. The marine stand-by program for hazardous ships at the locks accounted for about 41 percent of the responses this year. This service is provided by Fire Division personnel with foam apparatuses on stand-by at the locks as a marine safety measure for those vessels

designated by the Marine Bureau as carrying dangerous cargos. The critical period is considered to be when a vessel is entering the locks.

There were 2,103 responses for ambulance service compared to 1,707 in fiscal year 1991. This division also responded to a total of 39 bomb threats during the year, the same number as last year. Excluding ship fires, there were 481 fires this year, an 8 percent increase over fiscal year 1991. Most incidents were grass and brush fires, which frequently occurred during the vulnerable dry season. Additional fire statistics appear in Table 16 of this report.

In accordance with the Panama Canal Treaty of 1977, formal joint training was conducted on 4 occasions with the Bomberos of the Republic of Panama as compared to 6 for last year. This figure is in addition to regularly occurring joint responses to fires and other emergencies.

CANAL PROTECTION

During fiscal year 1992, the Canal Protection Division provided security for equipment, installations, facilities, and personnel devoted to the operation, maintenance and management of the Panama Canal.

The Division also jointly patrols remote canal areas with the Panama National Police.

Considerable resources were expended safeguarding navigational aids and related equipment along the waterway. Security hardware improvements at critical installations and support facilities were made. A contract for a centralized security control system was issued.

HEALTH AND SAFETY

The Occupational Health and Safety Divisions are components of the Office of Personnel Administration. The Personnel Director is the Designated Agency Safety and Health Official. The Panama Canal Commission is committed to ensuring a safe and healthful workplace for its employees, an objective which enjoys support from all levels of Commission management.

During fiscal year 1992, the Commission experienced 354 performance-of-duty injuries/illnesses for which employees required medical attention beyond first aid, a decrease from the 375 cases in fiscal year 1991. Hearing loss cases were included in the agency statistics for the first time in fiscal year 1992, bringing the total number of performance-of-duty injuries/illnesses to 385 and the incidence rate for fiscal year 1992 to 4.4 per 100 employees; this compares to a fiscal year 1991 rate of 4.5. There were two fatalities in fiscal year 1992.

Existing workplace health and safety programs were strengthened during fiscal year 1992. Formal workplace inspections were ongoing; compliance with all aspects of the Hazard Communication Policy was stressed and the

Hazardous Materials Inventory and Material Safety Data Sheets library were computerized; the Seat Belt Policy was revitalized; and the periodic physical examination program was reinforced. The agency received a Department of Transportation award for high seat belt usage in fiscal year 1991, having achieved 85 percent, and qualified for another award in 1992. Special training and/or media information on AIDS, cholera and dengue fever were provided to employees. The joint labor/management Safety and Health Committee continued to meet regularly to maintain its valuable role in the agency's overall health and safety program. The agency's program was formally evaluated by the Federal Occupational Safety and Health Administration during fiscal year 1992.

The Commission's Drug-Free Workplace Plan continued in full effect, with incident, accident, reasonable suspicion, random and applicant drug testing; counseling, rehabilitation and referral services through the agency's Employee Assistance Program; and strict penalties for those who refused the services offered or did not refrain from drug use. Public awareness of drug and alcohol abuse prevention, identification and rehabilitation was intensified.

Counseling and clinics relating to stress management, nutrition, weight management and smoking cessation continued, resulting in a comprehensive work site health and safety promotion program for the Panama Canal Commission.

The Commission awarded a contract to assess the risks of, and prepare a contingency plan for, a hazardous materials emergency. As an outgrowth of that, the contractor conducted a workshop for managers from the various Commission elements performing health, environmental and safety functions, with the objective of developing recommendations for improving coordination, optimizing use of resources and enhancing performance in these areas.

Chapter IV

ADMINISTRATION AND STAFF

PERSONNEL FORCE EMPLOYED AND PAYROLL

At the end of fiscal year 1992, the total Isthmian force of the Commission was 8,548 compared to 8,740 in fiscal year 1991. Of the total Isthmian force, 7,301 were permanent and 1,247 temporary. Of the permanent Isthmian work force, 6,411 (87.8%) were Panamanians, 825 (11.3%) were U.S. citizens, and 65 (0.9%) were third country nationals. Seventeen persons, all U.S. citizens, were employed by the Commission in New Orleans and Washington, DC.

The total Commission payroll was \$227.2 million in fiscal year 1992 compared to \$229.5 million in fiscal year 1991. Of the total Commission fiscal year 1992 payroll, \$174.6 million was paid to non-U.S. citizen employees and \$52.6 million to U.S. citizen employees.

EQUAL OPPORTUNITY PROGRAM

The agency's fiscal year 1991 Affirmative Employment Program Report for Minorities and Women (EEO-MD-714) and the Report for the Employment of People with Disabilities (EEO-MD-713) for the U.S. citizen work force were submitted to the Equal Employment Opportunity Commission during fiscal year 1992, as required.

Formal EEO complaints continued to be processed. Black History Month, National Hispanic Heritage Month, and National Disability Employment Awareness Month were commemorated. Six-hundred and ninety employees attended Women's Week training during March. Continued emphasis was placed on the training of supervisors and managers in the EEO complaint process. One-hundred and seventy supervisors and employees attended workshops on the prevention of sexual harassment in the workplace, including attendance at a special video conference sponsored by the U.S. Office of Personnel Management. Additional training was provided to EEO counselors on the new 29 CFR 1614 regulations to become effective October 1, 1992. The Panamanian

Preference Program monitoring continued to reflect increased participation of R.P. nationals at all levels. The composition of the work force by sex, minority group and citizenship at the end of fiscal year 1992 is reflected below:

Sex	
Male	87.0%
Female	13.0%

Minority Group				
<i>Hispanics</i>	<i>Blacks</i>	<i>Whites</i>	<i>Orientals</i>	<i>Indians</i>
66.9%	21.1%	9.7%	1.8%	0.5%

PUBLIC AFFAIRS

The Office of Public Affairs is responsible for handling all public affairs, orientation services and informational activities of the Panama Canal Commission, both locally and internationally. In this connection, through the Commission publication **The Panama Canal Spillway**, local and international press releases (including simultaneous worldwide distribution by computer), video news releases and documentaries, press releases (including simultaneous worldwifilms and exhibits, and matters of interest were disseminated to the work force, the public at large and the shipping industry. A digest of items in the local press of interest to Commission managers was compiled and distributed daily.

The Graphic Branch supports the public affairs effort by providing a broad range of still photo and audiovisual support services throughout the Commission. This year it continued to expand its program of producing audiovisual presentations to fill an accelerated need by Commission officials who provide briefings to Panama government officials on matters related to the turnover of the Canal to Panama in 1999 and to Commission board members on current operations and future plans.

Local and international news media interest focused on the turnover of the Canal to Panama in 1999, the Gaillard Cut widening project and the transit of hazardous cargo through the Canal. Other areas of interest were general Canal operations, the tolls increase, the Canal watershed and the linehandler scheduling study.

The Office of Public Affairs designed, produced, and operated Commission exhibits for a number of activities and functions during the year. "Meeting the Challenge" was the theme used to highlight the maintenance, modernization and improvement programs at the Canal designed to ensure its continued safe and efficient operation, both in the near term and post-2000. EXPOCOMER, a business exposition held in Panama City, and the David International Fair, held annually in the Chiriqui Province of Panama, were among the more noteworthy local

exhibits. This office also participated with exhibits in two cruise shipping conferences and exhibitions in the United States, one for owners and operators and one for the travel industry.

The Canal's 78th anniversary was highlighted with a photo exhibit on the construction of the Canal Administration Building displayed in the building's rotunda, and a special feature-length video was produced relating the history of Gaillard Cut construction with the current Cut Widening Program. Support was provided for Panama's participation in Spain's Expo Sevilla with informational materials and videos, as well as briefings on Canal operations for Panamanian exhibit hosts.

The Orientation Service, located at Miraflores Locks, welcomed 395,937 visitors to Miraflores and Gatun locks this year and conducted 976 VIP tours.

OMBUDSMAN

The Office of the Ombudsman was established pursuant to implementing legislation of the Panama Canal Treaty of 1977. The office responds to employees' and dependents' complaints, grievances, and requests for information; and channels many issues to the proper authorities for processing under existing statutes or administrative regulations. Generally, the Office of the Ombudsman investigates administrative problems, inefficiencies, omissions and policy conflicts existing within the various offices of the Panama Canal Commission, and between the Commission and other U.S. Government agencies on the Isthmus of Panama resulting from the treaty. The office provides the widest latitude possible for handling problems affecting employee morale and the quality of life.

The office maintains close contact with officers of the three Residents Advisory Committees as a means to assure close communication between the Commission and these community groups on matters of concern to residents in Commission housing areas.

INDUSTRIAL RELATIONS

A new three-year collective bargaining agreement covering employees in the firefighters bargaining unit was negotiated between April and July 1992. Additionally, the non-professional collective bargaining agreement, which covers 87 percent of the Commission's work force, was renewed for a three-year period commencing September 16. This occurred pursuant to an automatic renewal provision when neither party served notification during the contractual window of an intent to amend or modify the agreement.

In January, the FLRA ruled on exceptions the Commission filed to an arbitration award rendered in February 1991 involving firefighters. The Commission succeeded in overturning the largest of the two major cost items of the award. Costs saved (not including interest payment required under the Back Pay Act) were estimated at \$640K. The remaining cost item

was estimated at \$170K. Subsequent efforts to obtain FLRA reconsideration were unsuccessful and compliance with the award was ongoing at fiscal year end. The total cost including interest payments approximated \$225K.

Last year, it was reported that exceptions were pending to an FLRA administrative law judge decision which dismissed an unfair labor practice complaint against the Commission for unilaterally terminating access by nonpreference-eligible employees to the agency's administrative procedure for appealing adverse actions as an option to the negotiated grievance procedure. (Access to the negotiated grievance procedure was not affected by the Commission's action.) In February, the FLRA issued a decision finding, contrary to the judge, that the disputed action constituted an unfair labor practice. The ordered remedy includes a retroactive requirement which could result in hearings for over 300 employees at a cost to the Commission of over \$150K. Equally important, the FLRA also held that **as a matter of law** such Commission employees do not have the right to challenge adverse actions under the negotiated grievance procedure. The Commission filed a motion for reconsideration and a stay of the decision. The motion was denied in early September. The Commission requested the Department of Justice to seek judicial review and that request was pending at fiscal year end.

Two notable union initiatives this year generated a considerable amount of work for the Industrial Relations office. One concerned a request from the exclusive representative of the nonprofessional unit to increase the amount of official time. It was argued that an increase was necessary to facilitate more effective union participation in discussions with public officials in Panama concerning the future of the Canal -- an activity which was urged by the Personnel Committee of the Board of Directors at a 1990 meeting with labor organizations in Miami, Florida. A 3-phase trial plan was conceived to increase incrementally the amount of official time and the number of participating stewards. Progression from one phase to another was contingent upon the Commission's satisfaction. The fiscal year ended during the third phase of the trial period.

The other union initiative concerned a demand in February by the pilots union to negotiate an increase in basic pay. The union's proposal would provide the highest step pilot with a base pay of "at least \$175,000." The Commission declined on the basis of a current decision by the U.S. Court of Appeals for the Fourth Circuit which holds that, in such circumstances as exist in the Commission's case, unions do not have the right to initiate midterm bargaining. The Commission also expressed good faith doubts about the negotiability of the union's proposal. Although the union did not

formally challenge this decision, it continued through the end of the fiscal year to vigorously pursue in a variety of arenas the matter of obtaining a pay raise.

Three different exclusive representatives invoked arbitration a total of 10 times this fiscal year. Only one decision was rendered, however, and it was favorable to the Commission. Adverse and disciplinary actions were split evenly at 4 apiece. One of the disciplinary cases was eventually settled. The remaining case involved the performance evaluation of an employee who is also the subject of one of the disciplinary cases. The former case was held in abeyance at the union's request pending the decision of the latter, which was still pending at fiscal year end. Several other disputes were settled during the year but at a point before arbitration was invoked. Three other cases carried over from the prior fiscal year were disposed of this year. One was settled and the other two were dismissed when the union failed to prosecute them after the employee who was the subject of both cases retired.

GENERAL COUNSEL

During fiscal year 1992, twenty admiralty claims totalling \$17,533,576 were settled in the amount of \$11,293,533. The single largest claim ever paid was for the ITB MOKU PAHU in the amount of \$6.5 million. Thirty-eight unsettled marine accident claims, in the amount of approximately \$20,376,165, remained at the close of this fiscal year.

Currently, four cases are pending in U.S. District Court for the Eastern District of Louisiana. The total of the amounts claimed is \$7.8 million.

The new Standards of Ethical Conduct promulgated August 7, 1992 are being implemented locally through an aggressive training program scheduled to completely train all Commission employees by February 3, 1993. Additionally, the Commission has initiated the Confidential Financial Disclosure Reporting System.

The General Counsel's office monitored approximately 150 cases involving garnishment for alimony and child support, and 130 vehicle accident cases of which approximately 50 may result in claims against the Commission.

Despite the August 30, 1991 decision of the Corps of Engineers Board of Contract Appeals that denied all claims brought by Sosa y Barbero Constructores, S.A. and Compañía Internacional de Seguros, S.A., the contract appeal continued during the entire fiscal year. The co-appellants filed a motion for reconsideration with the Board, which the Commission opposed and the Board denied in December 1991. With over \$9 million dollars at stake, the co-appellants appealed the Board's final decision to the United States Court of Appeals for the Federal Circuit in January, 1992. Shortly after the fiscal year's end, on October 14, 1992, the court issued a final decision affirming in all respects the ruling by the Board of Contract Appeals. No further appeal is anticipated.

Chapter V

FINANCIAL REPORT

FINANCIAL STATEMENTS FOR THE FISCAL YEAR ENDED SEPTEMBER 30, 1992

The financial statements of the Panama Canal Commission, appearing as Tables 1 through 4, with accompanying notes, present the financial position of the Commission at September 30, 1992 and the result of its operations for the fiscal year then ended.

The accounts and statements of the Panama Canal Commission have been examined by the United States General Accounting Office. Detailed audit reports of the United States General Accounting Office are directed to the Congress and are presented as Congressional documents.

Summary information concerning the operating results and capital expenditures follows:

RESULTS OF OPERATIONS

The Commission ended fiscal year 1992 with a net operating loss of \$3.6 million, compared to net operating revenue of \$3.6 million for fiscal year 1991. The net operating loss for 1992 was deferred as unearned costs to be recovered from subsequent revenues.

CAPITAL EXPENDITURES

Accrued capital expenditures for the year amounted to \$26.3 million. The principal expenditures were \$8.2 million for replacement and improvements to facilities, \$3.1 million for the widening and straightening of Gaillard Cut, \$2.9 million for improvements to the electrical power and communication systems, \$2.0 million for the replacement of motor vehicles, \$1.9 million for the replacement of launch and launch engines, \$1.1 million for water system improvements, and \$1.1 million for replacement of an anchor barge.

Table 1.—Statement of Financial Position
September 30, 1992 and 1991
(Dollars in thousands)

Assets	1992	1991
PROPERTY, PLANT AND EQUIPMENT:		
At cost	\$1,038,128	\$1,022,626
Less accumulated depreciation and valuation allowances	<u>548,905</u>	<u>525,303</u>
	<u>489,223</u>	<u>497,323</u>
 CURRENT ASSETS:		
Cash	124,542	127,135
Accounts receivable	9,567	11,687
Inventories:		
Storehouse, less allowance for obsolete and excess inventory of \$6,200 and \$6,467, respectively	28,708	28,732
Fuel	3,479	5,168
Other	<u>235</u>	<u>205</u>
	<u>166,531</u>	<u>172,927</u>
 DEFERRED CHARGES:		
Early retirement benefits	106,008	121,152
Compensation benefits for work injuries	54,346	59,530
Retirement benefits to certain former employees	4,673	5,178
Unrecovered costs due from subsequent revenues	<u>3,569</u>	<u>.....</u>
	<u>168,596</u>	<u>185,860</u>
 TOTAL ASSETS	<u>\$ 824,350</u>	<u>\$ 856,110</u>

The accompanying notes are an integral part of this statement.

Table 1.—Statement of Financial Position
September 30, 1992 and 1991
(Dollars in thousands)

Capital and Liabilities	1992	1991
CAPITAL:		
Investment of the United States Government:		
Interest-bearing (9.786% and 9.949%, respectively)	\$122,271	\$120,557
Non-interest-bearing	<u>349,980</u>	<u>352,622</u>
	<u>472,251</u>	<u>473,179</u>
CURRENT LIABILITIES:		
Accounts payable:		
Commercial vendors and other	14,484	17,706
U.S. Government agencies	2,172	1,905
Republic of Panama	<u>9,060</u>	<u>8,827</u>
	<u>25,716</u>	<u>28,438</u>
Accrued liabilities:		
Employees' leave	54,257	50,590
Salaries and wages	6,767	4,826
Early retirement benefits	15,144	15,144
Compensation benefits for work injuries	9,093	8,460
Retirement benefits to certain former employees ..	626	692
Employees' repatriation	731	785
Marine accident claims	12,593	21,034
Net operating revenue payable to Republic of Panama .....	.....	875
Other	<u>2,148</u>	<u>1,969</u>
	<u>101,359</u>	<u>104,375</u>
Other current liabilities:		
Working capital contributions	2,000	.....
Capital contributions-unexpended .....	.....	9,079
Other	<u>1,200</u>	<u>2,100</u>
	<u>3,200</u>	<u>11,179</u>
	<u>130,275</u>	<u>143,992</u>
DEFERRED CREDIT:		
Capital contributions being amortized	<u>62,507</u>	<u>57,760</u>
LONG-TERM LIABILITIES AND RESERVES:		
Early retirement benefits	90,864	106,008
Compensation benefits for work injuries	45,253	51,070
Retirement benefits to certain former employees ..	4,047	4,486
Employees' repatriation	5,762	6,121
Lock overhauls	2,082	1,957
Marine accidents and casualty losses	8,000	8,000
Floating equipment overhauls	<u>3,309</u>	<u>3,537</u>
	<u>159,317</u>	<u>181,179</u>
TOTAL CAPITAL AND LIABILITIES.....	<u><u>\$824,350</u></u>	<u><u>\$856,110</u></u>

The accompanying notes are an integral part of this statement.

Table 2.—Statement of Operations
Fiscal Years Ended September 30, 1992 and 1991
(Dollars in thousands)

OPERATING REVENUES:	1992	1991
Tolls revenue	\$368,663	\$374,625
Less - Working capital contributions	(2,000)	.....
- Capital contributions	<u>.....</u>	<u>(5,929)</u>
Net tolls revenue	366,663	368,696
Other revenues	<u>138,913</u>	<u>137,725</u>
Total operating revenues	<u>505,576</u>	<u>506,421</u>
OPERATING EXPENSES:		
Payments to Republic of Panama:		
Public services	10,000	10,000
Fixed annuity	10,000	10,000
Tonnage	<u>66,563</u>	<u>67,593</u>
	86,563	87,593
Maintenance of channels, dams and spillways	40,338	35,628
Navigation service and control	84,768	86,221
Locks operation	51,766	53,778
General repair, engineering and maintenance		
services	25,098	25,775
Supply and transportation services	19,425	23,851
Utilities	35,932	31,772
Administrative and general	80,812	78,576
Depreciation	27,535	22,685
Fire and facility protection	14,707	13,351
Interest on interest-bearing investment	11,492	11,544
Other	<u>30,709</u>	<u>32,059</u>
Total operating expenses	<u>509,145</u>	<u>502,833</u>
Net Operating Revenue (Loss)	(3,569)	3,588
Recovery of prior year losses	<u>.....</u>	<u>(2,713)</u>
		875
NET UNEARNED COSTS TO BE RECOVERED		
FROM SUBSEQUENT REVENUES	<u>\$ (3,569)</u>	<u>.....</u>
NET OPERATING REVENUE PAYABLE TO		
REPUBLIC OF PANAMA		<u>\$ 875</u>

The accompanying notes are an integral part of this statement.

Table 3—Statement of Changes in the Investment of the United States Government
Fiscal Years Ended September 30, 1991 and 1992
(Dollars in thousands)

	1991 Invested Capital		Total
	Interest-Bearing	Non-Interest-Bearing	
INVESTMENT AT OCTOBER 1, 1990.....	<u>\$133,176</u>	<u>\$340,663</u>	<u>\$473,839</u>
CHANGES IN INVESTMENT:			
Expenditures from Panama Canal Revolving Fund	503,009	(503,009)	.....
Tolls and other receipts deposited into Panama Canal Revolving Fund.....	(515,001)	515,001	.....
Net change in undeposited receipts.....	.....	(33)	(33)
Adjustments for properties previously transferred to Republic of Panama.....	(63)	.....	(63)
Property transferred to other U.S. Government agencies.....	<u>(564)</u>	<u>.....</u>	<u>(564)</u>
	<u>(12,619)</u>	<u>11,959</u>	<u>(660)</u>
INVESTMENT AT SEPTEMBER 30, 1991.....	<u>\$120,557</u>	<u>\$352,622</u>	<u>\$473,179</u>
	1992 Invested Capital		Total
	Interest-Bearing	Non-Interest-Bearing	
INVESTMENT AT OCTOBER 1, 1991.....	<u>\$120,557</u>	<u>\$352,622</u>	<u>\$473,179</u>
CHANGES IN INVESTMENT:			
Expenditures from Panama Canal Revolving Fund	511,772	(511,772)	.....
Tolls and other receipts deposited into Panama Canal Revolving Fund.....	(509,091)	509,091	.....
Net change in undeposited receipts.....	.....	39	39
Property transferred to the Republic of Panama.....	(812)	.....	(812)
Adjustments for properties previously transferred to Republic of Panama.....	(6)	.....	(6)
Property transferred to other U.S. Government agencies.....	<u>(149)</u>	<u>.....</u>	<u>(149)</u>
	<u>1,714</u>	<u>(2,642)</u>	<u>(928)</u>
INVESTMENT AT SEPTEMBER 30, 1992.....	<u>\$122,271</u>	<u>\$349,980</u>	<u>\$472,251</u>

The accompanying notes are an integral part of this statement.

Table 4.—Statement of Cash Flows
Fiscal Years Ended September 30, 1992 and 1991
(Dollars in thousands)

	1992	1991
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net operating revenue (loss).....	<u>\$ (3,569)</u>	<u>\$ 3,588</u>
Working capital contributions	<u>2,000</u>	<u>.....</u>
Adjustments to reconcile net revenue (loss) to net cash provided by operating activities:		
Depreciation	27,535	22,685
Net change in reserves and other	(840)	2,455
Changes in operating assets and liabilities:		
Decrease in receivables	2,120	1,644
Decrease in inventories	1,713	6,100
(Increase)/decrease in other assets	(29)	14
Increase/(decrease) in liabilities	<u>(5,727)</u>	<u>4,453</u>
Total adjustments	<u>24,772</u>	<u>37,351</u>
Net cash provided by operating activities	<u>23,203</u>	<u>40,939</u>
 CASH FLOWS FROM INVESTING ACTIVITIES:		
Capital contributions .....	.....	5,929
Capital expenditures	<u>(25,796)</u>	<u>(34,214)</u>
Net cash used in investing activities	<u>(25,796)</u>	<u>(28,285)</u>
Net increase/(decrease) in cash	(2,593)	12,654
Cash, beginning of year	<u>127,135</u>	<u>114,481</u>
CASH, END OF YEAR	<u>\$124,542</u>	<u>\$127,135</u>
 SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid during year for interest	<u>\$ 11,691</u>	<u>\$ 11,562</u>

The accompanying notes are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS

The Panama Canal Commission ("Commission") is an agency of the Executive Branch of the United States Government, provided for by the Panama Canal Treaty of 1977, ("Treaty") and established by the Panama Canal Act of 1979 ("Act") enacted September 27, 1979. The Commission was established to carry out the responsibilities of the United States with respect to the Panama Canal under the Treaty. In fulfilling these obligations, the Commission manages, operates, and maintains the Canal, its complementary works, installations, and equipment, and provides for the orderly transit of vessels through the Canal. The Commission will perform these functions until the Treaty terminates on December 31, 1999, at which time the Republic of Panama will assume full responsibility for the Canal, which shall be turned over in operating condition and free of liens and debts, except as the two Parties may otherwise agree.

The operation of the waterway is conducted on a self-financing basis. The Commission is expected to recover through tolls and other revenues all costs of operating and maintaining the Canal, including interest, depreciation, working capital, capital for plant replacement, expansion and improvements, and payments to the Republic of Panama for public services and annuities. Revenues from tolls and all other sources are deposited in the U.S. Treasury in an account known as the Panama Canal Revolving Fund. The resources in this fund are available for continuous use and serve to finance Canal operating and capital programs which are reviewed annually by the Congress. Information on obligations and outlays of the Commission's Revolving Fund are included in the Budget of the United States Government.

1. Summary of Significant Accounting Policies.

A summary of significant accounting policies follows:

a. Accounting and Reporting. The accounts of the Commission are maintained pursuant to the Accounting and Auditing Act of 1950. Under this Act, the Comptroller General of the United States prescribes the principles, standards and related requirements to be met. The Commission maintains its accounts in accordance with generally accepted accounting principles and follows STATEMENT OF FINANCIAL ACCOUNTING STANDARDS Nº 71, "Accounting for the Effects of Certain Types of Regulation."

b. Reclassifications. Certain amounts for fiscal year 1991 have been reclassified to conform with the current financial statement presentation.

c. Cost Recovery. The basis for tolls rates ("statutory tolls formula") is prescribed in section 1602(b) of the Act and provides:

"Tolls shall be prescribed at rates calculated to produce revenues to cover as nearly as practicable all costs of maintaining and

operating the Panama Canal, together with the facilities and appurtenances related thereto, including unrecovered costs incurred on or after the effective date of this Act, interest, depreciation, working capital, payments to the Republic of Panama pursuant to paragraph 5 of Article III and paragraph 4(a) and (b) of Article XIII of the Panama Canal Treaty of 1977, and capital for plant replacement, expansion, and improvements. Tolls shall not be prescribed at rates calculated to produce revenues sufficient to cover payments to the Republic of Panama pursuant to paragraph 4(c) of Article XIII of the Panama Canal Treaty of 1977."

Unrecovered costs for any year are to be recovered from revenues in subsequent years.

d. Property, Plant and Equipment. Property, plant, and equipment are recorded at cost. The cost of minor items of property, plant, and equipment is charged to expense as incurred. Administrative and other related general expenses are recovered currently and not capitalized.

Depreciation of Commission property, plant, and equipment is provided using the straight-line method over the estimated service lives of the depreciable assets. Composite depreciation is provided for premature plant retirements. Provisions for depreciation, expressed as an annual percentage of the cost of average depreciable property, plant, and equipment in service, were 3.41 percent in 1992 and 2.90 percent in 1991.

The recurring costs of dredging the waterway are charged to expense. Non-recurring dredging costs for substantial improvements and betterments to the waterway are considered additions to plant and are capitalized and depreciated over their estimated service lives.

e. Capital Contributions. The Board of Directors may program a portion of tolls in excess of depreciation for plant replacement, expansion, or improvements. Such funds are considered capital contributions from Canal users. Upon utilization, these contributions are amortized through an offset to depreciation expense in an amount calculated to approximate the depreciation on assets acquired with such contributions. In fiscal year 1992, no amount was programmed. For fiscal year 1991, \$5.9 million were programmed.

f. Working Capital. The Board of Directors may program a portion of tolls as contributions for working capital. Such funds are used to finance increases in amounts for storehouse inventories, primarily as a result of inflation. Working capital contributions in fiscal year 1992 were \$2.0 million. No contributions were programmed in fiscal year 1991.

g. Accounts Receivable. Uncollectible accounts are recognized as a reduction in revenue when written off.

h. Inventories. Operating materials and supplies are stated at average cost, plus cost of transportation. Allowances are provided for the estimated cost of obsolete and excess stock.

i. Retirement Benefits. Employer contributions to the United States Civil Service Retirement System, the Federal Employee Retirement System, and the Republic of Panama Social Security System are charged to expense when paid. The Commission has no liability for future payments to employees under these systems.

Non-United States citizen employees, who retired from predecessor agencies prior to October 5, 1958, receive benefits under a separate annuity plan. Payments made under this plan are recorded as a current year expense. Annual amounts expended for this plan were \$1.0 million and \$1.1 million in fiscal years 1992 and 1991, respectively. The liability for future annuity payments is reflected in the Statement of Financial Position as "Retirement benefits to certain former employees" and an equal amount is recorded as a deferred charge.

As required by the Act, the Commission is liable for the increase in the unfunded liability of the United States Civil Service Retirement Fund for benefits payable to employees and their survivors under the early retirement provisions of the Act. The deferred charge and liability recorded in these statements reflect the payments due to the Office of Personnel Management over the life of the Treaty. The annual installment of \$15.1 million to liquidate the increased liability is determined by the Office of Personnel Management. The gross amount to be recovered from tolls over the remaining life of the Treaty was \$106.0 million as of fiscal year 1992 and \$121.2 million as of fiscal year 1991.

j. Reserves. Reserves required to normalize expenses for incorporation in the tolls process are provided for through annual charges to operations. These reserves cover such irregular costs as lock overhauls, floating equipment overhauls, probable losses from marine accidents, fire, damages other than fire, public liability, and other casualties.

k. Housing Use Rights. No monetary value is assigned to the rights granted to the United States Government by the Republic of Panama to use Canal Area housing transferred to the Republic of Panama under the terms of the Treaty. The cost to manage, maintain and provide livability improvements to these quarters is charged to expense. Rental income is included in other revenues.

l. Compensation Benefits for Work Injuries. The Federal Employees' Compensation Act (FECA) provides compensation for performance of duty injuries for eligible employees. The costs of the FECA program are recognized over the remaining life of the Treaty.

2. Budgetary Resources.

a. Cash, accounts receivable, and the borrowing authority are the resources used by the Commission to determine its solvency position. Incurring obligations in excess of the solvency position would be a violation of the Antideficiency Act.

b. The Commission has authority to borrow funds from the U.S.

Treasury up to \$100.0 million. No funds were borrowed during fiscal years 1992 and 1991.

3. Unrecovered Costs due from Subsequent Revenues.

The \$3.6 million net loss from fiscal year 1992 operations was deferred as an unearned cost to be recovered from subsequent revenues. As such, it must be deducted from any future net operating revenue due the Republic of Panama.

4. Net Revenue Payable to Republic of Panama.

As of September 30, 1989, cumulative unrecovered costs from prior years operations were \$9.7 million. Of that amount, \$7.0 million was recovered in fiscal year 1990 and \$2.7 million was recovered in fiscal year 1991. The balance of net operating revenues earned in fiscal year 1991 of \$0.9 million was paid to the Republic of Panama in April 1992.

5. Allowances for Obsolete and Excess Stock.

The allowances for obsolete and excess stock provide for: (1) the specific disposal of individual inventory items likely to occur; and (2) the systematic cost recognition for inventory items retained for possible use, but whose actual use most often does not occur. During fiscal year 1991, a comprehensive evaluation of inventory items that are infrequently issued, but retained for possible use, was completed. This evaluation indicated a requirement for an allowance of \$5.6 million for these items. The evaluation completed for fiscal year 1992 indicated reduced requirement of \$5.2 million and the allowance was adjusted accordingly.

6. Compensation Benefits for Work Injuries.

The Commission administers a program to compensate certain employees for death and disability resulting from performance of duty injuries or illnesses as set forth in the Federal Employees' Compensation Act. All United States citizen employees are eligible for coverage, as are non-United States citizen employees hired prior to October 1, 1979. As provided by FECA, employees and certain dependents are beneficiaries for various periods that can extend to life.

The liability and deferred charge recorded in these statements reflect the payments due to a Department of Labor fund established pursuant to Public Law 100-705. The Department of Labor will be reimbursed from this fund for all expected future payments for accidents, adjusted for inflation and interest earned. An evaluation, as of September 30, 1991, was prepared by an independent actuarial firm. The values in that report were used to adjust the assets and liabilities at year-end 1991. The report also served as the basis for determining the adequacy of the assets and liabilities at year-end 1992. The gross amount to be recovered from tolls over the remaining life of the Treaty to retire this liability is \$54.3 million in fiscal year 1992 and \$59.5 million in fiscal year 1991.

7. Interest—Bearing Investment of the United States Government.

The interest-bearing investment of the United States Government in the Panama Canal is determined based on section 1603(a) of the Act. The interest-bearing investment of the United States Government was \$122.3 million at September 30, 1992 and \$120.6 million at September 30, 1991.

8. Contingent Liabilities and Commitments.

The Commission is a defendant in certain legal actions related to personal injury, employment disputes, and other matters related to the Commission's business. In the opinion of management, the settlement of these legal actions will not have a material adverse effect on the financial position of the Commission.

Commitments under uncompleted construction contracts and unfilled purchase orders amounted to \$44.4 million at September 30, 1992 and \$31.7 million at September 30, 1991.

Cash and negotiable securities held by United States depositories for the Commission to guarantee payment by third parties of their obligations were \$15.3 million and \$14.5 million at September 30, 1992 and 1991, respectively.

The Treaty provides that an annual amount of up to \$10.0 million per year be paid to the Republic of Panama out of operating revenues to the extent that such revenues exceed expenditures. If the operating revenues in any year do not produce a surplus sufficient to cover this payment, the unpaid balance shall be paid from operating surpluses in future years. The balance contingently payable to the Republic of Panama amounted to \$120.2 million and \$110.2 million at September 30, 1992 and 1991, respectively. However, as set forth in the Treaty and in the Act, nothing shall be construed as obligating the United States Government to pay, after the date of the termination of the Treaty, any unpaid balance accumulated before such date.

Chapter VI

STATISTICAL TABLES

Shipping Statistics

Table 1.—Panama Canal Traffic—Fiscal Years 1983 Through 1992

Fiscal year	Total traffic			Traffic assessed tolls on net tonnage basis		Traffic assessed tolls on displacement tonnage basis	
	Number of transits	Tolls	Long tons of cargo	Number of transits	Panama Canal net tonnage	Number of transits	Displacement tonnage
OCEANGOING COMMERCIAL TRAFFIC ¹							
1983	11,707	\$285,983,805	145,590,759	11,668	169,503,918	39	132,431
1984	11,230	286,677,844	140,470,818	11,199	162,335,342	31	116,335
1985	11,515	298,497,802	138,643,243	11,498	168,941,997	17	86,623
1986	11,925	321,073,748	139,945,181	11,901	182,750,830	24	73,631
1987	12,230	328,372,714	148,690,380	12,206	186,416,485	24	130,129
1988	12,234	337,866,211	156,482,641	12,209	191,506,903	25	106,599
1989	11,989	327,850,613	151,636,113	11,964	185,769,083	25	101,710
1990	11,941	353,725,982	157,072,979	11,904	181,604,268	37	153,514
1991	12,572	372,279,573	162,695,886	12,544	191,786,855	28	120,375
1992	12,454	365,716,456	159,272,618	12,425	188,516,426	29	117,403
OCEANGOING U.S. GOVERNMENT TRAFFIC ¹							
1983	125	\$ 1,721,925	354,873	77	812,840	48	350,699
1984	137	2,388,272	329,607	88	1,131,865	49	410,682
1985	129	2,223,938	259,524	85	1,148,311	44	248,967
1986	85	1,553,037	176,853	53	708,616	32	309,161
1987	78	1,384,125	205,701	46	662,286	32	239,023
1988	69	1,361,393	296,140	46	714,055	23	129,545
1989	74	1,806,539	224,121	62	994,711	12	103,020
1990	91	1,707,864	248,442	63	821,340	28	193,160
1991	173	2,214,170	516,130	69	902,085	104	458,899
1992	167	2,790,452	341,256	96	1,295,153	71	405,986
FREE OCEANGOING TRAFFIC ^{1 2}							
1983	14	.....	2,504	9	9,119	5	5,986
1984	17	.....	.....	4	2,224	13	21,025
1985	10	.....	20	4	2,731	6	8,771
1986	13	.....	.....	1	556	12	20,759
1987	5	.....	5	4	2,224	1	1,300
1988	15	.....	.....	6	3,312	9	16,765
1989	12	.....	.....	6	3,312	6	9,709
1990	20	.....	6	4	2,218	16	30,530
1991	18	.....	.....	4	2,218	14	24,702
1992	15	.....	.....	4	2,206	11	18,508
TOTAL OCEANGOING TRAFFIC ¹							
1983	11,846	\$287,705,730	145,948,136	11,754	170,325,877	92	489,116
1984	11,384	289,066,116	140,800,425	11,291	163,469,431	93	548,042
1985	11,654	300,721,740	138,902,787	11,587	170,093,039	67	344,361
1986	12,023	322,626,785	140,122,034	11,955	183,460,002	68	403,551
1987	12,313	329,756,840	148,896,086	12,256	187,080,995	57	370,452
1988	12,318	339,227,604	156,778,781	12,261	192,224,270	57	252,909
1989	12,075	329,657,153	151,860,234	12,032	186,767,106	43	214,439
1990	12,052	355,433,846	157,321,427	11,971	182,427,826	81	377,204
1991	12,763	374,493,743	163,212,016	12,617	192,691,158	146	603,976
1992	12,636	368,506,908	159,613,874	12,525	189,813,785	111	541,897

Table 1.—Panama Canal Traffic—Fiscal Years 1983 through 1992
(Continued)

Fiscal year	Total traffic			Traffic assessed tolls on net tonnage basis		Traffic assessed tolls on displacement tonnage basis	
	Number of transits	Tolls	Long tons of cargo	Number of transits	Panama Canal net tonnage	Number of transits	Displacement tonnage
SMALL COMMERCIAL TRAFFIC ³							
1983	810	\$ 73,887	669	810	48,033	....	.....
1984	802	76,921	652	800	48,008	2	145
1985	793	73,710	468	792	45,694	1	110
1986	912	89,577	3,704	904	55,249	8	470
1987	852	90,829	3,282	852	55,827	....	.....
1988	844	79,805	1,422	842	49,245	2	64
1989	997	96,158	8,311	996	60,156	1	430
1990	1,017	115,180	1,497	1,016	66,999	1	98
1991	1,079	118,675	537	1,077	67,982	2	64
1992	1,260	137,318	1,250	1,258	77,747	2	304
SMALL U.S. GOVERNMENT TRAFFIC ³							
1983	242	\$ 11,406	5	12	332	230	11,177
1984	241	11,998	.....	8	336	233	11,282
1985	273	12,464	.....	15	773	258	11,113
1986	316	17,840	.....	20	627	296	16,407
1987	236	11,106	.....	25	987	211	9,572
1988	246	11,917	.....	21	901	225	10,375
1989	287	12,316	.....	13	738	274	11,018
1990	240	8,931	.....	23	903	217	6,684
1991	248	12,319	.....	12	654	236	10,065
1992	231	18,278	81	28	3,027	203	11,753
SMALL FREE TRAFFIC ^{2 3}							
1983	56	.....	8	39	2,321	17	2,010
1984	96	.....	59	86	4,637	10	1,360
1985	46	.....	3	32	1,721	14	1,103
1986	27	.....	80	20	1,371	7	674
1987	43	.....	57	26	1,451	17	1,012
1988	33	.....	.....	15	1,081	18	1,189
1989	30	.....	3	14	878	16	1,141
1990	16	.....	.....	5	249	11	800
1991	18	.....	.....	13	568	5	545
1992	21	.....	19	11	932	10	792
TOTAL PANAMA CANAL TRAFFIC							
1983	12,954	\$287,791,023	145,948,818	12,615	170,376,563	339	502,303
1984	12,523	289,155,035	140,801,136	12,185	163,522,412	338	560,829
1985	12,766	300,807,914	138,903,258	12,426	170,141,227	340	356,687
1986	13,278	322,734,202	140,125,818	12,899	183,517,249	379	421,102
1987	13,444	329,858,775	148,899,425	13,159	187,139,260	285	381,036
1988	13,441	339,319,326	156,780,203	13,139	192,275,497	302	264,537
1989	13,389	329,765,627	151,868,548	13,055	186,828,878	334	227,028
1990	13,325	355,557,957	157,322,924	13,015	182,495,977	310	384,786
1991	14,108	374,624,737	163,212,553	13,719	192,760,362	389	614,650
1992	14,148	368,662,504	159,615,224	13,822	189,895,491	326	554,746

¹ Oceangoing traffic includes ships of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on displacement basis (dredges, warships, etc.).

² Free traffic includes ships of the Colombian and Panamanian Governments and ships transiting for repair by the Commission.

³ Includes vessels under 300 net tons, Panama Canal measurement (or under 500 displacement tons for vessels assessed on displacement tonnage).

Table 2.—Oceangoing Commercial Traffic by Months—Fiscal Years 1992 and 1991

	Number of Transits		Panama Canal Net Tonnage		Long Tons of Cargo		Tolls	
	1991-92	1990-91	1991-92	1990-91	1991-92	1990-91	1991-92	1990-91
October	1,005	1,057	16,128,253	16,707,635	12,898,296	13,958,989	\$ 31,195,525	\$ 32,363,567
November	959	1,031	15,594,411	16,880,588	12,792,743	13,450,705	30,200,942	32,624,748
December	1,007	1,012	15,754,891	16,476,713	13,718,866	13,990,720	30,603,865	32,203,919
January	1,102	1,069	16,616,079	16,380,900	13,989,270	12,765,155	32,148,424	31,672,292
February	1,042	1,082	15,253,832	16,238,059	12,715,319	12,973,905	29,655,425	31,441,967
March	1,186	1,177	16,632,396	16,753,382	13,947,358	14,224,070	32,287,473	32,544,260
April	1,107	1,065	15,923,614	15,176,965	14,155,296	13,192,667	31,114,174	29,673,759
May	1,061	1,042	15,880,697	15,492,825	13,342,166	13,511,448	30,791,717	30,126,362
June	998	1,015	15,103,200	15,042,574	13,094,757	13,665,432	29,289,724	29,168,535
July	1,003	1,021	15,301,563	15,803,262	13,948,067	14,441,553	29,892,181	30,954,441
August	1,006	1,021	15,708,951	16,072,796	12,032,957	13,649,501	30,159,514	31,004,138
September	978	980	14,618,539	14,761,156	12,637,523	12,871,741	28,377,492	28,501,584
Total	12,454	12,572	188,516,426	191,786,855	159,272,618	162,695,886	\$365,716,456	\$372,279,573
Average per month	1,038	1,048	15,709,702	15,982,238	13,272,718	13,557,991	\$ 30,476,371	\$ 31,023,298

NOTE: The above includes only commercial vessels of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on a displacement tonnage basis. Statistics on these vessels, except as relates to displacement tonnage, have been included in the table above.

Table 3.—Canal Traffic¹ by Flag of Vessel—Fiscal Year 1992

Flag	Number of transits	Measured tonnage		Tolls	Long tons of cargo
		Panama Canal net	Registered gross ²		
Antigua-Barbuda	30	117,228	132,862	\$ 234,762	76,081
Argentina	2	8,420	12,502	15,198	190
Australia	1	37,253	44,154	74,879	19,497
Austria	6	142,306	171,334	274,382	47,888
Bahamas	792	9,907,617	11,588,244	19,474,237	7,265,859
Bahrain	2	24,518	30,244	49,281	21,521
Barbados	2	5,836	7,778	11,730	5,172
Belgium	3	.....	17,802	20,824	.....
Belize	13	20,458	15,486	38,092	10,329
Bermuda	1	11,988	15,092	24,096	15,160
Bolivia	5	41,955	49,185	84,330	53,783
Brazil	28	491,919	588,797	967,754	602,200
Bulgaria	3	40,085	46,843	80,571	52,523
Canada	11	42,873	53,305	87,872	3,076
Cayman Islands	1	21,327	23,081	42,867	35,277
Chile	96	940,837	1,050,098	1,870,863	1,133,994
Colombia	112	693,319	665,361	1,365,460	262,447
Cuba	71	487,337	559,888	968,272	511,796
Cyprus	709	8,205,435	9,508,778	15,903,640	8,922,657
Czechoslovakia	15	237,384	286,854	453,582	255,113
Denmark	268	5,634,332	6,959,314	11,229,494	4,087,308
Dominican Republic	2	1,120	598	2,251	52
Ecuador	331	2,462,527	2,793,930	4,784,385	1,161,445
Egypt	4	74,293	92,062	140,271	86,825
Estonia	2	13,411	17,137	26,716	20,668
Faroës	1	1,494	1,521	2,390	.....
Federal Republic of Germany	337	4,377,658	5,241,081	8,709,597	3,046,315
Finland	1	11,257	13,974	22,627	17,784
France	54	942,416	810,138	1,848,601	639,718
Greece	689	11,316,941	12,796,664	22,032,232	14,442,307
Honduras	20	34,314	39,861	66,009	17,738
Hong Kong	29	570,174	696,220	1,125,227	912,981
Hungary	1	2,680	3,416	5,387	796
Iceland	1	565	684	1,136	.....
India	38	808,298	976,716	1,561,687	973,866
Iran	4	44,308	57,516	84,518	8,810
Ireland	2	2,962	3,166	5,954	1,448
Israel	64	1,842,990	2,268,920	3,704,410	1,291,787
Italy	94	1,795,569	2,266,063	3,582,789	2,166,072
Japan	390	7,356,083	5,317,596	13,808,588	2,020,320
Kuwait	3	43,270	58,190	86,973	36,959
Latvia	11	153,380	205,655	282,712	116,623
Liberia	1,479	27,142,946	28,280,049	52,295,220	21,824,232
Luxembourg	63	803,686	1,013,434	1,586,476	717,187
Malagasy Republic	1	9,389	11,531	18,872	4,180
Malaysia	31	476,432	544,795	938,109	706,464
Malta	241	3,283,540	3,823,547	6,281,073	3,331,821
Marshall Islands	23	332,724	389,198	661,844	486,278
Mauritius	1	17,966	22,311	36,112	30,182
Mexico	65	995,643	1,224,546	1,815,817	601,641
Morocco	10	156,381	194,844	296,788	183,200
Myanmar	50	848,497	980,803	1,657,626	836,263
Netherlands	237	2,657,039	3,034,620	5,198,869	1,851,034
Netherlands Antilles	45	450,390	490,470	894,253	166,213
New Zealand	1	501	650	802	.....
North Korea	1	7,852	9,012	15,783	12,809
Norway	702	11,861,502	12,585,759	23,268,353	12,494,362
Panama	2,214	32,380,787	33,247,949	61,990,806	22,593,531
Paraguay	1	1,740	2,281	3,497	2,352
People's Republic of China	268	4,736,761	5,807,998	9,358,773	5,727,876

Table 3.—Canal Traffic¹ by Flag of Vessel—Fiscal Year 1992—Continued

Flag	Number of transits	Measured tonnage		Tolls	Long tons of cargo
		Panama Canal net	Registered gross ²		
Peru	98	1,093,338	1,089,196	\$ 2,100,659	905,020
Philippines	433	6,500,444	7,386,665	12,799,741	8,320,774
Poland	80	785,250	924,592	1,555,895	681,173
Portugal	3	33,938	44,776	63,274	27,650
Qatar	3	36,154	45,210	72,670	10,392
Romania	13	95,897	114,102	188,915	132,346
Sierra Leone	1	3,176	1,385	6,384	1,181
Singapore	186	3,840,659	3,860,163	7,320,752	3,220,923
South Korea	161	4,502,348	4,880,956	8,784,575	3,617,684
Spain	9	44,771	51,096	\$ 89,125	63,136
Sri Lanka	46	442,468	507,311	854,512	157,316
St. Vincent & Grenadines	133	1,415,492	1,644,657	2,773,643	1,368,232
Sweden	65	2,020,763	1,610,161	3,997,111	756,386
Switzerland	12	300,097	368,302	582,021	429,188
Taiwan	153	5,054,355	5,935,137	10,159,254	4,253,838
Thailand	1	9,273	8,477	14,837	.....
Toga	3	40,941	17,994	76,696	2,162
Turkey	26	344,463	415,302	678,421	470,139
U.S.S.R.	303	2,793,009	3,316,680	5,388,400	2,133,243
United Arab Emirates ...	6	72,020	90,408	144,760	72,849
United Kingdom	253	4,831,193	5,756,454	9,432,524	4,142,468
United States	414	5,294,941	5,337,951	9,945,766	4,014,829
Vanuatu	202	3,001,576	2,806,754	5,597,111	1,816,917
Venezuela	146	506,701	581,481	996,634	407,098
Yugoslavia	22	321,246	377,508	617,061	353,664
Total	12,454	188,516,426	204,324,625	\$365,716,456	159,272,618

¹ Includes only commercial vessels of 300 net tons and over, Panama Canal measurement, or of 500 displacement tons and over on vessels paying tolls on displacement basis (dredges, warships, etc.).

² Includes 11 transits where no registered tonnage was reported.

NOTE.—In Canal traffic statistics, foreign naval vessels such as transports, supply ships, tankers, etc., with a measurement of 300 net tons (Panama Canal measurement) and over, and vessels of war, dredges, etc., with a displacement of 500 tons and over, are classified as oceangoing commercial vessels. Statistics on these vessels, except as related to displacement tonnage, have been included in the table above. As displacement tonnage cannot be combined with net tonnage, the following table shows statistics covering 29 vessels which transited the Canal during fiscal year 1992 and paid tolls on displacement tonnage.

Flag	Type	Number of transits	Displacement tonnage	Tolls
Belgium	Dredge	1	5,730	\$ 6,418
Canada	Naval	2	7,882	8,828
Chile	Naval	3	9,470	10,606
Ecuador	Naval	2	2,384	2,670
France	Naval	2	4,067	4,555
Italy	Naval	2	14,700	16,464
Mexico	Naval	2	3,662	4,101
Netherlands	Dredge	1	9,486	10,624
Panama	Dredge	3	9,474	10,611
People's Republic of China	Dredge	1	20,123	22,538
Portugal	Naval	1	1,800	2,016
U.S.S.R.	Naval	1	2,899	3,247
United Kingdom	Naval	1	5,394	6,041
United Kingdom	Dredge	2	12,863	14,407
United States	Naval	2	2,100	2,352
United States	Dredge	3	5,369	6,013
Total		29	117,403	\$131,491

Table 4.—Classification of Canal Traffic' by Type of Vessel—Fiscal Year 1992

	Type of Vessel		Laden		Ballast		Grand Total
	Atlantic to Pacific	Pacific to Atlantic	Pacific to Atlantic	Atlantic to Pacific	Atlantic to Pacific	Total	
CARGO AND CARGO/PASSENGER SHIPS:							
Bulk Carriers:							
Dry Bulk Carriers:							
Number of transits	1,597	1,047	2,644	14	494	508	3,152
Panama Canal net tonnage (thousands)	33,221	18,462	51,683	165	9,988	10,153	61,837
Tolls (thousands of dollars)	\$66,747	\$37,108	\$103,855	\$265	\$15,981	\$16,246	\$120,101
Cargo (thousands of long tons)	55,442	28,101	83,543	.....	.....	.....	83,543
Dry/Liquid Bulk Carriers:							
Number of transits	12	7	19	2	1	3	22
Panama Canal net tonnage (thousands)	372	185	557	44	24	68	625
Tolls (thousands of dollars)	\$748	\$371	\$1,119	\$71	\$39	\$109	\$1,228
Cargo (thousands of long tons)	508	273	781	.....	.....	.....	781
Vehicle Carriers:							
Number of transits	110	280	390	248	9	257	647
Panama Canal net tonnage (thousands)	4,290	10,947	15,237	9,655	104	9,759	24,996
Tolls (thousands of dollars)	\$8,622	\$22,003	\$30,626	\$15,449	\$166	\$15,615	\$46,240
Cargo (thousands of long tons)	153	1,227	1,380	.....	.....	.....	1,380
Vehicle/Dry-Bulk Carriers:							
Number of transits	56	59	115	1	11	12	127
Panama Canal net tonnage (thousands)	1,079	1,270	2,349	30	209	239	2,588
Tolls (thousands of dollars)	\$2,168	\$2,553	\$4,721	\$49	\$334	\$382	\$5,104
Cargo (thousands of long tons)	1,668	1,075	2,743	.....	.....	.....	2,743
Container Cargo Ships:							
Container/Breakbulk Ships:							
Number of transits	329	283	612	7	33	40	652
Panama Canal net tonnage (thousands)	4,582	3,975	8,557	50	321	372	8,929
Tolls (thousands of dollars)	\$9,210	\$7,990	\$17,200	\$81	\$514	\$595	\$17,795
Cargo (thousands of long tons)	3,457	3,105	6,561	.....	.....	.....	6,561
Full Container Ships:							
Number of transits	540	560	1,100	2	.....	2	1,102
Panama Canal net tonnage (thousands)	13,779	14,366	28,145	26	.....	26	28,171
Tolls (thousands of dollars)	\$27,695	\$28,876	\$56,571	\$42	.....	\$42	\$56,614
Cargo (thousands of long tons)	9,897	8,831	18,728	.....	.....	.....	18,728

General Cargo Ships:					
Number of transits	778	667	1,445	49	101
Panama Canal net tonnage (thousands)	6,104	5,469	11,573	313	600
Tolls (thousands of dollars)	\$12,270	\$10,992	\$23,262	\$501	\$959
Cargo (thousands of long tons)	5,316	4,091	9,407	.....	.....
Passenger Ships (2):					
Number of transits	91	52	143	2	3
Panama Canal net tonnage (thousands)	1,966	1,061	3,028	8	15
Tolls (thousands of dollars)	\$3,952	\$2,133	\$6,086	\$13	\$24
Cargo (thousands of long tons)	.....	.....	.....	.....	.....
Refrigerated Cargo Ships:					
Number of transits	605	1,253	1,858	622	36
Panama Canal net tonnage (thousands)	4,628	8,782	13,410	4,001	184
Tolls (thousands of dollars)	\$9,302	\$17,653	\$26,954	\$6,402	\$294
Cargo (thousands of long tons)	728	4,014	4,742	.....	.....
Fishing Vessels:					
Number of transits	136	189	325	51	7
Panama Canal net tonnage (thousands)	110	161	271	55	9
Tolls (thousands of dollars)	\$221	\$324	\$545	\$89	\$15
Cargo (thousands of long tons)	15	96	111	.....	.....
Tank Ships:					
Tankers:					
Number of transits	711	485	1,196	108	213
Panama Canal net tonnage (thousands)	11,019	7,512	18,531	2,125	3,025
Tolls (thousands of dollars)	\$22,149	\$15,098	\$37,247	\$3,400	\$4,840
Cargo (thousands of long tons)	17,564	11,315	28,879	.....	.....
Liquid Gas Carriers:					
Number of transits	115	15	130	4	75
Panama Canal net tonnage (thousands)	1,299	186	1,486	50	883
Tolls (thousands of dollars)	\$2,611	\$375	\$2,986	\$80	\$1,413
Cargo (thousands of long tons)	1,339	154	1,493	.....	.....

1,595

12,486

\$24,723

9,407

150

913

\$1,460

.....

.....

.....

General Cargo Ships:

Number of transits

Panama Canal net tonnage (thousands)

Tolls (thousands of dollars)

Cargo (thousands of long tons)

Passenger Ships (2):

Number of transits

Panama Canal net tonnage (thousands)

Tolls (thousands of dollars)

Cargo (thousands of long tons)

Refrigerated Cargo Ships:

Refrigerated Cargo Vessels:

Number of transits

Panama Canal net tonnage (thousands)

Tolls (thousands of dollars)

Cargo (thousands of long tons)

Fishing Vessels:

Number of transits

Panama Canal net tonnage (thousands)

Tolls (thousands of dollars)

Cargo (thousands of long tons)

Tank Ships:

Tankers:

Number of transits

Panama Canal net tonnage (thousands)

Tolls (thousands of dollars)

Cargo (thousands of long tons)

Liquid Gas Carriers:

Number of transits

Panama Canal net tonnage (thousands)

Tolls (thousands of dollars)

Cargo (thousands of long tons)

OTHER TYPE SHIPS:

Naval Vessels:							
Number of transits	.....	.....	.....	10	8	18	18
Displacement tonnage (thousands)	.....	.....	.....	26	28	54	54
Tolls (thousands of dollars)	.....	.....	.....	\$29	\$32	\$61	\$61
Cargo (thousands of long tons)	.....	.....	.....	.....	.....	.....	.....
Barges, Dredges, Drydocks, Tugs, etc.:							
Number of transits	.....	.....	.....	39	90	129	366
Panama Canal net tonnage (thousands)	.....	.....	.....	55	509	564	1,803
Displacement tonnage (thousands)	.....	.....	.....	52	11	63	63
Tolls (thousands of dollars)	.....	.....	.....	\$145	\$827	\$973	\$3,463
Cargo (thousands of long tons)	.....	.....	.....	.....	.....	.....	904
SUMMARY:							
Total Cargo and Cargo/Passenger Ships:							
Number of transits	.....	.....	.....	1,110	983	2,093	12,070
Panama Canal net tonnage (thousands)	.....	.....	.....	16,525	15,362	31,888	186,713
Tolls (thousands of dollars)	.....	.....	.....	\$26,441	\$24,580	\$51,020	\$362,220
Cargo (thousands of long tons)	.....	.....	.....	.....	.....	.....	158,368
Total Other Type Ships:							
Number of transits	.....	.....	.....	49	98	147	384
Panama Canal net tonnage (thousands)	.....	.....	.....	55	509	564	1,803
Displacement tonnage (thousands)	.....	.....	.....	78	39	117	117
Tolls (thousands of dollars)	.....	.....	.....	\$175	\$859	\$1,034	\$3,524
Cargo (thousands of long tons)	.....	.....	.....	.....	.....	.....	904
Grand Total Ships:							
Number of transits	.....	.....	.....	1,159	1,081	2,240	12,454
Panama Canal net tonnage (thousands)	.....	.....	.....	16,580	15,872	32,451	188,516
Displacement tonnage (thousands)	.....	.....	.....	78	39	117	117
Tolls (thousands of dollars)	.....	.....	.....	\$26,615	\$25,439	\$52,054	\$365,716
Cargo (thousands of long tons)	.....	.....	.....	.....	.....	.....	159,273

¹ Includes only commercial vessels of 300 net tons and over (Panama Canal measurement) for vessels paying tolls on net tonnage basis, or of 500 displacement tons and over for vessels paying on displacement tonnage.

² Vessels certificated for more than 12 passengers.

Table 5.—Laden and Ballast Traffic by Flag of Vessel
Fiscal Year 1992

Flag	Laden			Ballast		
	Number of transits	Panama Canal net tonnage	Tolls	Number of transits	Panama Canal net tonnage	Tolls
Antigua-Barbuda	29	115,116	\$ 231,383	1	2,112	\$ 3,379
Argentina	1	4,210	8,462	1	4,210	6,736
Australia	1	37,253	74,879	.....	.....	.....
Austria	5	113,885	228,909	1	28,421	45,474
Bahamas	665	8,834,268	17,756,879	127	1,073,349	1,717,358
Bahrain	2	24,518	49,281	.....	.....	.....
Barbados	2	5,836	11,730	.....	.....	.....
Belize	8	13,072	26,275	5	7,386	11,818
Bermuda	1	11,988	24,096	.....	.....	.....
Bolivia	5	41,955	84,330	.....	.....	.....
Brazil	25	440,691	885,789	3	51,228	81,965
Bulgaria	3	40,085	80,571	.....	.....	.....
Canada	5	25,482	51,219	4	17,391	27,826
Cayman Islands	1	21,327	42,867	.....	.....	.....
Chile	84	865,652	1,739,961	9	75,185	120,296
Colombia	93	624,754	1,255,756	19	68,565	109,704
Cuba	62	459,837	924,272	9	27,500	44,000
Cyprus	577	6,768,155	13,603,992	132	1,437,280	2,299,648
Czechoslovakia	13	179,920	361,639	2	57,464	91,942
Denmark	236	5,401,372	10,856,758	32	232,960	372,736
Dominican Republic	2	1,120	2,251	.....	.....	.....
Ecuador	264	2,052,858	4,126,245	65	409,669	655,470
Egypt	3	52,200	104,922	1	22,093	35,349
Estonia	1	12,825	25,778	1	586	938
Faroes . . . . .	.....	.....	.....	1	1,494	2,390
Federal Republic of Germany	314	4,159,377	8,360,348	23	218,281	349,250
Finland	1	11,257	22,627	.....	.....	.....
France	39	819,953	1,648,106	13	122,463	195,941
Greece	563	9,573,479	19,242,693	126	1,743,462	2,789,539
Honduras	16	27,089	54,449	4	7,225	11,560
Hong Kong	26	519,388	1,043,970	3	50,786	81,258
Hungary	1	2,680	5,387	.....	.....	.....
Iceland	1	565	1,136	.....	.....	.....
India	30	654,659	1,315,865	8	153,639	245,822
Iran	3	33,231	66,794	1	11,077	17,723
Ireland	2	2,962	5,954	.....	.....	.....
Israel	64	1,842,990	3,704,410	5	104,313	166,901
Italy	87	1,691,256	3,399,425	73	2,383,363	3,813,381
Japan	317	4,972,720	9,995,207	.....	.....	.....
Kuwait	3	43,270	86,973	4	62,395	99,832
Latvia	7	90,985	182,880	252	5,449,003	8,718,405
Liberia	1,227	21,693,943	43,576,815	11	70,569	112,910
Luxembourg	52	733,117	1,473,565	.....	.....	.....
Malagasy Republic	1	9,389	18,872	.....	.....	.....
Malaysia	28	428,823	861,934	3	47,609	76,174
Malta	186	2,505,875	5,036,809	55	777,665	1,244,264
Marshall Islands	22	315,818	634,794	1	16,906	27,050
Mauritius	1	17,966	36,112	.....	.....	.....
Mexico	39	533,382	1,072,098	24	462,261	739,618
Morocco	7	113,606	228,348	3	42,775	68,440
Myanmar	42	731,782	1,470,882	8	116,715	186,744
Netherlands	195	2,285,323	4,593,499	41	371,716	594,746
Netherlands Antilles	42	423,486	851,207	3	26,904	43,046
New Zealand . . . . .	.....	.....	.....	1	501	802
North Korea	1	7,852	15,783	.....	.....	.....
Norway	609	10,463,292	21,031,217	93	1,398,210	2,237,136
Panama	1,709	24,807,161	49,862,394	502	7,573,626	12,117,802
Paraguay	1	1,740	3,497	.....	.....	.....
People's Republic of China	240	4,286,385	8,615,634	27	450,376	720,602
Peru	81	856,874	1,722,317	17	236,464	378,342
Philippines	367	5,851,293	11,761,099	66	649,151	1,038,642
Poland	71	730,475	1,468,255	9	54,775	87,640
Portugal	1	16,969	34,108	1	16,969	27,150
Qatar	3	36,154	72,670	.....	.....	.....
Romania	11	86,535	173,935	2	9,362	14,979
Sierra Leone	1	3,176	6,384	.....	.....	.....
Singapore	149	2,867,555	5,763,786	37	973,104	1,556,966
South Korea	142	3,855,653	7,749,863	19	646,695	1,034,712
Spain	7	42,663	85,753	2	2,108	3,373
Sri Lanka	37	357,471	718,517	9	84,997	135,995
St. Vincent & Grenadines	117	1,241,112	2,494,635	16	174,380	279,008
Sweden	58	1,863,147	3,744,925	7	157,616	252,186
Switzerland	10	248,454	499,393	2	51,643	82,629
Taiwan	153	5,054,355	10,159,254	.....	.....	.....
Thailand . . . . .	.....	.....	.....	1	9,273	14,837
Togo	2	27,294	54,861	1	13,647	21,835

**Table 5.—Laden and Ballast Traffic by Flag of Vessel
Fiscal Year 1992—Continued**

<i>Flag</i>	<i>Laden</i>			<i>Ballast</i>		
	<i>Num- ber of transits</i>	<i>Panama Canal net tonnage</i>	<i>Tolls</i>	<i>Num- ber of transits</i>	<i>Panama Canal net tonnage</i>	<i>Tolls</i>
Turkey	23	310,439	\$ 623,982	3	34,024	\$ 54,438
United Arab Emirates	6	72,020	144,760	46	693,209	1,109,134
United Kingdom	206	4,137,984	8,317,348	134	1,720,562	2,752,899
United States	275	3,574,379	7,184,502	58	558,036	892,858
U.S.S.R.	244	2,234,973	4,492,296	57	1,063,553	1,701,685
Vanuatu	145	1,938,023	3,895,426	23	53,255	85,208
Venezuela	123	453,446	911,426	4	69,862	111,779
Yugoslavia	18	251,384	505,282			
Total	10,214	156,065,008	\$313,662,696	2,211	32,451,418	\$51,922,269

Above table involves only commercial vessels of 300 net tons or over, Panama Canal measurement.

Table 6.—Segregation of Transits' by Registered Gross Tonnage—Fiscal Year 1992

	Average gross tonnage per vessel										Registered gross tonnage		Total ²	40,000 and over				
	Under 2,000	2,000-3,999	4,000-5,999	6,000-7,999	8,000-9,999	10,000-14,999	15,000-19,999	20,000-29,999	30,000-39,999	40,000 and over								
Antigua-Barbuda	8	9	7	2	.....	4	.....	.....	.....	.....	30	132,862	30	.....	.....	.....	.....	4,429
Argentina	.....	.....	.....	2	.....	.....	.....	.....	.....	.....	2	12,502	2	.....	.....	.....	.....	6,251
Australia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	44,154	1	.....	.....	.....	.....	44,154
Austria	24	48	70	74	109	194	25	202	34	12	6	171,334	6	.....	.....	.....	.....	28,556
Bahamas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	792	11,588,244	792	.....	.....	.....	.....	14,632
Bahrain	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	30,244	2	.....	.....	.....	.....	15,122
Barbados	.....	1	1	.....	.....	.....	.....	.....	.....	.....	2	7,778	2	.....	.....	.....	.....	3,889
Belize	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	13	15,486	13	.....	.....	.....	.....	1,191
Bermuda	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	1	15,092	1	.....	.....	.....	.....	15,092
Bolivia	.....	.....	.....	.....	5	.....	.....	.....	.....	.....	5	49,185	5	.....	.....	.....	.....	9,837
Brazil	.....	.....	.....	.....	6	5	4	7	.....	6	28	588,797	28	.....	.....	.....	.....	21,028
Bulgaria	.....	.....	.....	.....	.....	2	.....	.....	.....	.....	3	46,843	3	.....	.....	.....	.....	15,614
Canada	2	3	1	.....	1	.....	.....	.....	.....	.....	9	45,494	9	.....	.....	.....	.....	5,055
Cayman Islands	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	23,081	1	.....	.....	.....	.....	23,081
Chile	8	1	.....	.....	9	73	.....	.....	.....	.....	93	1,047,183	93	.....	.....	.....	.....	11,260
Colombia	61	4	.....	.....	.....	46	.....	.....	.....	.....	112	665,361	112	.....	.....	.....	.....	5,941
Cuba	1	24	.....	.....	15	29	2	.....	.....	.....	71	559,888	71	.....	.....	.....	.....	7,886
Cyprus	38	30	42	47	146	163	114	87	36	6	709	9,508,778	709	.....	.....	.....	.....	13,412
Czechoslovakia	.....	.....	.....	3	.....	4	.....	4	4	.....	15	286,854	15	.....	.....	.....	.....	19,124
Denmark	65	10	8	4	7	39	8	15	6	106	268	6,959,314	268	.....	.....	.....	.....	25,968
Dominican Republic	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	598	2	.....	.....	.....	.....	299
Ecuador	30	20	1	125	47	74	21	11	.....	.....	329	2,792,062	329	.....	.....	.....	.....	8,487
Egypt	.....	.....	.....	.....	.....	.....	.....	4	.....	.....	4	92,062	4	.....	.....	.....	.....	23,016
Estonia	1	.....	.....	.....	.....	.....	1	.....	.....	.....	2	17,137	2	.....	.....	.....	.....	8,568
Faroes	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	1,521	1	.....	.....	.....	.....	1,521
Federal Republic of Germany	2	7	23	11	72	72	69	62	19	.....	337	5,241,081	337	.....	.....	.....	.....	15,552
Finland	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	1	13,974	1	.....	.....	.....	.....	13,974
France	5	7	4	.....	.....	2	18	11	2	2	51	810,138	51	.....	.....	.....	.....	15,885
Greece	74	.....	9	49	81	125	80	67	204	.....	689	12,796,664	689	.....	.....	.....	.....	18,573
Honduras	15	.....	.....	5	.....	.....	.....	.....	.....	.....	20	39,861	20	.....	.....	.....	.....	1,993
Hong Kong	.....	.....	1	.....	1	3	11	.....	13	.....	29	696,220	29	.....	.....	.....	.....	24,008
Hungary	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	1	3,416	1	.....	.....	.....	.....	3,416
Iceland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	684	1	.....	.....	.....	.....	684
India	.....	.....	.....	.....	.....	2	15	9	3	9	38	976,716	38	.....	.....	.....	.....	25,703
Iran	.....	.....	.....	.....	.....	4	.....	.....	.....	.....	4	57,516	4	.....	.....	.....	.....	14,379
Ireland	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	3,166	2	.....	.....	.....	.....	1,583
Israel	.....	.....	.....	.....	.....	.....	.....	8	56	.....	64	2,268,920	64	.....	.....	.....	.....	35,452
Italy	1	.....	3	.....	11	10	3	26	38	.....	92	2,244,281	92	.....	.....	.....	.....	24,394
Japan	151	8	21	27	12	2	28	76	25	40	390	5,317,596	390	.....	.....	.....	.....	13,635
Kuwait	.....	.....	.....	.....	.....	.....	2	1	.....	.....	3	58,190	3	.....	.....	.....	.....	19,397

[illegible]

Table 6.—Segregation of Transits¹ by Registered Gross Tonnage—Fiscal Year 1992 (Continued)

	Under 2,000	2,000 to 3,999	4,000 to 5,999	6,000 to 7,999	8,000 to 9,999	10,000 to 14,999	15,000 to 19,999	20,000 to 29,999	30,000 to 39,999	40,000 and over	Total ²	Registered gross tonnage	Average gross tonnage per vessel
Venezuela	117	.....	.....	2	.....	15	8	.....	4	.....	146	581,481	3,983
Yugoslavia .....	.....	.....	.....	1	8	4	3	3	3	.....	22	377,508	17,159
Total	917	582	783	1,092	1,413	2,344	1,239	1,865	1,638	541	12,414	204,227,382	16,451
Percent of Total	7.4	4.7	6.3	8.8	11.4	18.9	10.0	15.0	13.2	4.4	100.0		

¹ Includes only commercial vessels of 300 net tons and over, Panama Canal measurement.² Excludes 29 vessels paying tolls on displacement tonnage basis and 11 transits where no registered tonnage was reported.

Table 7.—Principal Commodities Shipped through Canal by Fiscal Years 1990 through 1992

	South Atlantic to Pacific			Commodity [Thousands of long tons]	North Pacific to Atlantic		
	1990	1991	1992		1992	1991	1990
Canned and Refrigerated Foods.....	701	830	806		5,018	5,229	4,796
Canned Foods.....	30	18	33		124	140	128
Fish.....	2	2	1		6	24	21
Fruit.....	3	3	4		24	15	4
Milk.....	9	11	23		66	68	80
Other and unclassified.....	16	2	6		29	32	23
Refrigerated Foods.....	671	812	773		4,894	5,089	4,668
Bananas.....	6	8	8		2,145	2,115	1,621
Dairy Products.....	1	1	9		68	48	11
Fish.....	209	238	166		397	714	927
Fruit, excluding bananas.....	55	145	135		1,342	1,288	1,154
Meat.....	11	10	15		102	117	63
Other and unclassified.....	389	410	439		841	808	891
Chemicals and Petroleum Chemicals.....	5,770	6,888	6,327		1,446	1,181	962
Caustic Soda.....	918	1,014	734		96	29	.....
Chemicals, unclassified.....	3,566	3,869	4,277		1,192	1,061	871
Petroleum Chemicals, miscellaneous.....	1,286	2,005	1,316		158	92	91
Coal and Coke (excluding petroleum coke).....	5,065	4,636	4,424		4,484	3,756	3,051
Grains.....	27,998	29,584	29,684		3,034	3,312	2,242
Barley.....	10	110	91		112	595	292
Corn.....	14,012	14,985	14,329		29	48	3
Oats.....	2	99	37		7	1	1
Rice.....	224	162	138		580	419	432
Sorghum.....	2,029	1,734	1,947		.....	.....	9
Soybeans.....	6,059	6,265	7,207		20	39	97
Wheat.....	5,425	5,828	5,435		2,189	2,161	1,363
Other and unclassified.....	237	400	501		98	49	45
Lumber and Products.....	2,608	3,665	4,663		5,222	5,883	6,861
Boards and planks.....	18	152	70		1,832	2,779	3,695
Plywood, veneers, composition board.....	18	14	5		801	667	748
Pulpwood.....	980	1,006	1,518		2,272	2,058	2,063
Other and unclassified.....	1,592	2,493	3,070		316	379	355
Machinery and Equipment.....	514	396	517		1,417	1,537	1,558

50	32	27	Agricultural machinery and implements	4	11	17
310	235	277	Automobiles, trucks, accessories and parts	1,323	1,378	1,384
86	71	99	Construction machinery and equipment	35	59	106
33	21	22	Electrical machinery and apparatus	9	26	9
1	1	54	Motorcycles, bicycles and parts	23	24	2
35	36	37	Other and unclassified	23	39	40
4,248	5,445	3,854	Manufactures of Iron and Steel	2,817	2,808	2,950
241	229	152	Angles, shapes, and sections	91	96	67
3	7	17	Nails, tacks, and spikes	34	28	52
2,351	3,435	2,022	Plates, sheets, and coils	1,357	1,242	1,471
147	259	225	Tubes, pipes, and fittings	323	337	333
900	950	735	Wire, bars, and rods	226	197	166
606	565	702	Other and unclassified	786	908	863
204	124	88	Minerals, miscellaneous	4,398	4,814	4,733
7	28	12	Asbestos	3	.....	3
3	1	1	Borax	368	398	424
.....	2	.....	Infusorial earth .....	.....	.....	.....
33	29	36	Salt	830	1,139	1,374
96	63	31	Soda and sodium compounds	602	323	222
65	.....	8	Sulfur	2,596	2,954	2,710
11,713	13,156	12,460	Nitrates, Phosphates, and Potash	1,332	1,562	2,079
480	778	648	Ammonium compounds	19	25	28
1	13	.....	Fishmeal	658	795	1,281
8	20	58	Nitrate of soda	388	296	383
7,957	9,210	8,354	Phosphates	227	339	268
442	783	827	Potash	2	52	52
2,826	2,352	2,573	Fertilizers, miscellaneous	39	75	67
3,772	3,652	2,942	Ores and Metals	6,616	7,714	8,686
798	787	738	Ores	5,547	6,375	7,410
229	162	159	Alumina/bauxite	769	1,706	3,040
6	73	62	Chrome	28	19	46
67	26	28	Copper	1,037	488	471
182	161	120	Iron	407	295	413
8	15	5	Lead	182	243	224
86	92	140	Manganese	130	172	313
.....	.....	2	Tin	2	4	12
30	24	34	Zinc	1,159	927	763
189	234	188	Other and unclassified	1,833	2,521	2,128

Table 7.—Principal Commodities Shipped through Canal by Fiscal Years 1990 through 1992—Continued

Commodity	South Atlantic to Pacific			North Pacific to Atlantic		
	1990	1991	1992	1992	1991	1990
[Thousands of long tons]						
Metals.....				1,069	1,340	1,275
Aluminum.....	409	503	465	9	12	13
Copper.....	8	3	7	704	978	892
Iron.....	291	194	243	43	19	14
Lead.....	15	1	2	66	104	80
Scrap.....	2,186	2,102	1,424	2	.....	28
Tin, including tinplate.....	11	12	17	8	.....	11
Zinc.....	7	8	4	165	178	220
Other and unclassified.....	48	41	42	71	40	19
Other Agricultural Commodities.....	1,803	1,848	1,768	3,201	3,287	3,634
Beans, edible.....	78	11	10	106	63	56
Cocoa and cacao beans.....	4	2	2	38	44	40
Coffee, raw and processed.....	7	.....	6	281	318	421
Copra and coconuts.....	2	.....	.....	7	6	7
Cotton, raw.....	51	67	41	77	61	64
Molasses.....	13	17	12	647	633	714
Oilseeds.....	122	97	236	61	33	88
Peas, dry.....	12	11	3	53	36	11
Rubber, raw.....	4	2	7	44	36	47
Skins and hides.....	3	.....	1	.....	2	27
Sugar.....	1,508	1,640	1,450	1,885	2,053	2,153
Wool, raw.....	.....	1	.....	1	3	6
Petroleum and Petroleum Products.....	11,709	13,036	13,373	11,826	10,964	13,521
Asphalt.....	25	70	108	10	1	.....
Crude oil.....	2,687	3,215	4,346	3,936	5,024	6,575
Diesel oil.....	1,430	1,368	1,300	538	141	98
Fuel oil, residual.....	1,891	2,506	2,055	3,287	2,037	3,620
Gasoline.....	1,938	1,804	1,640	661	1,162	310
Jet fuel.....	912	819	1,031	53	26	70
Kerosene.....	101	200	33	115	.....	.....
Liquefied gas.....	999	1,338	1,085	155	41	147
Lubricating oil.....	612	578	566	213	129	171
Petroleum coke.....	784	748	895	2,610	2,365	2,447
Other and unclassified.....	331	390	313	247	38	82

	14,861	16,202	15,940	Miscellaneous	11,615	11,189	11,034
Bricks and tile	11	13	26	.....	11	4	11
Carbon black	28	81	113	.....	2	11	1
Cement	543	948	318	.....	2	5	5
Clay, fire and china	623	708	724	.....	16	21	87
Fibers, plant	2	1	2	.....	6	3	12
Flour, wheat	149	194	272	.....	59	.....	2
Glass and glassware	11	5	8	.....	4	5	5
Groceries, miscellaneous	54	48	46	.....	42	52	22
Liquors and wines	7	2	2	.....	22	9	14
Marble and stone	69	93	127	.....	1	.....	3
Oil, coconut	6	8	1	.....	17	46	70
Oil, fish	.....	1	.....	.....	115	144	213
Oil, vegetable	176	235	202	.....	214	191	232
Paper and paper products	944	1,069	1,078	.....	494	551	448
Porcelainware	1	6	10	.....	.....	1	1
Resin	75	81	87	.....	1	1	1
Rubber, manufactured	21	11	7	.....	5	5	16
Seeds, excluding oilseeds	.....	.....	71	.....	20	24	13
Slag, clinkers, and dross	146	240	52	.....	12	5	28
Tallow	75	126	117	.....	32	28	36
Textiles	7	8	8	.....	7	18	15
Tobacco and manufactures	.....	.....	.....	.....	.....	.....	1
Wax, paraffin	15	3	11	.....	32	11	13
Container cargo	11,347	11,628	12,039	.....	9,837	9,567	9,375
All other and unclassified	547	691	618	.....	662	487	412
Total	<u>90,966</u>	<u>99,460</u>	<u>96,846</u>	.....	<u>62,427</u>	<u>63,236</u>	<u>66,107</u>

Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal from Atlantic to Pacific During Fiscal Year 1992
Segregated by Countries in Principal Trade Routes

[Long tons]

	To West Coast United States				To W. C. Canada				To West Coast Central America					
	Alaska	Hawaii	Mainland	Total	Canada	Costa Rica	El Salvador	Guatemala	Mexico	Nicaragua	Panama	Central America (other) ¹	Bahia, R.P. ²	Total
EAST COAST NORTH AMERICA:														
United States:														
North Atlantic ports	.....	4,190	41,259	45,449	19,298	5,164	36,419	85,386	108,134	20,606	2,819	4,920	11,077	274,525
South Atlantic ports	.....	1,838	22,265	24,103	5,472	6,054	6,513	20	84,118	4,100	28,448	486	12,894	142,633
Great Lakes ports	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gulf ports	.....	.....	1,496,549	1,496,549	10,676	598,852	621,735	402,892	1,352,254	115,704	71,020	132,727	578,033	3,876,217
United States (other) ¹	.....	.....	52,798	52,798	.....	85	.....	28,686	28,828	.....	432	2,764	5,524	66,319
Total United States	1,838	4,190	1,612,871	1,618,899	35,446	610,155	664,667	516,984	1,576,334	140,410	102,719	140,897	607,528	4,359,694
EAST COAST CANADA														
.....	.....	69	89,627	89,696	705	3,965	9,095	.....	276,527	5,121	2,218	.....	.....	296,926
EAST COAST CENTRAL AMERICA:														
Mexico	.....	.....	3,223	3,223	.....	1,299	354,532	.....	681,853	.....	.....	.....	1,280	1,038,964
Panama	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,632	.....	394,332	399,964
Central America (other) ¹	.....	.....	150	150	.....	.....	.....	.....	.....	.....	169	150	65	384
Cristobal, R.P. ²	.....	.....	1,944	1,944	.....	15	.....	9	.....	.....	.....	.....	10,790	10,814
Total Central America	.....	.....	5,317	5,317	.....	1,314	354,532	9	681,853	.....	5,801	150	406,467	1,450,126
EAST COAST SOUTH AMERICA:														
Brazil	1,045	.....	785,319	786,364	43,064	24,545	7,025	34,861	20,062	5,014	.....	46,316	839	138,662
Colombia	12,460	.....	85,066	206,169	9,795	131	4,076	15,737	182,177	1,949	430	34	25,527	230,061
Venezuela	.....	193,422	1,798,201	1,991,623	13,271	79,448	460,008	326,765	106,250	651,934	12,906	19,786	72,563	1,729,660
South America (other) ¹	4,568	.....	47,103	51,671	5,954	8,870	.....	4,082	47,533	.....	443	1,754	.....	62,682
Total South America	18,073	302,065	2,715,689	3,035,827	72,084	112,994	471,109	381,445	356,022	658,897	13,779	67,890	98,929	2,161,065
WEST INDIES:														
Cuba	.....	.....	.....	.....	10,051	.....	.....	.....	.....	130	.....	12,054	.....	12,184
Jamaica	.....	.....	2,618	2,618	29,658	.....	.....	.....	.....	.....	.....	.....	.....	.....
Netherlands West Indies	.....	.....	151,175	182,136	.....	178	13	5,696	1,236	8,589	.....	177	57,432	73,321
Trinidad/Tobago	.....	30,961	178,427	206,207	18,834	55,508	.....	25,708	.....	.....	14,919	12,200	15,611	123,946
West Indies (other) ¹	.....	.....	164,999	164,999	.....	64	1,494	6	69,853	.....	.....	29,567	2,385	103,369
Total West Indies	.....	58,741	497,219	555,960	58,543	55,750	1,507	31,410	71,089	8,719	14,919	53,998	75,428	312,820

EUROPE:

Belgium .....	.....	327,862	327,862	23,597	11,311	13,329	48,418	60	21,327	63	9,446	1,125	105,079
France .....	.....	178,931	179,468	18,373	22,013	.....	.....	.....	5,914	.....	.....	6,741	34,668
Germany	537	319,313	319,313	31,940	3,107	6,950	16,541	66	3,298	714	4,850	2,927	38,433
Italy .....	.....	254,524	254,524	25,466	12,465	595	13,179	.....	1,126	12	.....	3,509	30,886
Netherlands .....	.....	320,939	320,939	38,274	17,155	1,248	31,875	29,658	10,654	.....	4,586	3,270	98,446
Norway .....	.....	156,644	156,644	108	750	.....	10,005	.....	6,514	.....	.....	.....	17,269
Spain-Portugal .....	.....	116,172	116,172	6,412	6,696	48,373	.....	1,224	6,303	44	213	23,015	85,868
Sweden .....	.....	51,596	51,596	322	.....	.....	.....	.....	.....	69	.....	.....	69
United Kingdom .....	.....	114,677	114,677	10,883	.....	.....	.....	.....	.....	9	.....	1,540	1,549
U.S.S.R. ....	.....	.....	.....	.....	9,352	88,847	13,090	30,294	663	15	2,604	.....	144,865
Europe (other) ¹	3,059	851,067	854,126	131,467	14,134	17,395	6,749	217,645	25,360	.....	52,176	4,411	337,870
Total Europe	3,596	2,691,725	2,695,321	286,842	96,983	176,737	139,857	278,947	81,159	926	73,875	46,538	895,022

ASIA (MIDDLE EAST)

AFRICA

.....	9,578	71,014	80,592	13,779	936	5,463	8	20,186
-------	-------	--------	--------	-------	-------	--------	-----	-------	-------	---	-------	-------	--------

Percent of Pacific-bound cargo	0.0	0.4	8.0	8.4	1.3	0.9	1.8	1.1	3.5	0.9	0.1	0.3	1.3	10.0
--------------------------------------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	------

GRAND TOTAL	33,085	365,380	7,728,668	8,127,133	1,304,222	881,161	1,721,079	1,070,641	3,434,254	899,769	140,370	336,824	1,234,890	9,718,988
-------------------	--------	---------	-----------	-----------	-----------	---------	-----------	-----------	-----------	---------	---------	---------	-----------	-----------

Table 8.—Origin and Destination of Commercial Cargo Through the Panama Canal from Atlantic to Pacific During Fiscal Year 1992
Segregated by Countries in Principal Trade Routes—Continued

[Long tons]

	To West Coast South America				To Oceania		
	Chile	Colombia	Ecuador	Peru	South America (other) ¹	Australia	French Oceania New Zealand (other) ¹ Total
EAST COAST NORTH AMERICA:							
United States:							
North Atlantic ports	129,291	41,655	103,973	134,933	61,072	170,476	581 62,970 60,836 294,863
South Atlantic ports	125,118	35,421	289,438	108,426	37,566	150,353	3,105 205,589 41,919 400,966
Great Lakes ports	.....	.....	.....	453	.....	.....	.....
Gulf ports	1,241,675	403,499	496,044	1,109,831	128,898	1,675,946	..... 276,602 131,398 2,083,946
United States (other) ¹	132,575	22,603	56,591	55,572	70,868	194,192	959 35,239 29,806 260,196
Total United States	1,628,659	503,178	946,046	1,409,215	298,404	2,190,967	4,645 580,400 263,959 3,039,971
EAST COAST CANADA							
	9,631	141,510	48,711	22,220	8,419	43,479	..... 32,807 3,418 79,704
EAST COAST CENTRAL AMERICA:							
Mexico	36,643	87,477	140,537	56,738	22,288	1,202	..... 2,063 14 3,265
Panama	.....	2,182	.....	25,542	1,037	.....	..... 14 14
Central America (other) ¹	.....	7,267	1,396	1,400	1,585	.....	.....
Cristobal, R.P. ²	8,916	129	11,600	3,129	9,439	.....	..... 30 30
Total Central America	45,559	97,055	153,533	86,809	34,349	1,202	..... 2,093 14 3,309
EAST COAST SOUTH AMERICA:							
Brazil	395	23,713	63,734	3,139	5,744	.....	.....
Colombia	55,878	481,816	10,668	1,080,404	25,648	.....	.....
Venezuela	796,139	12,463	180,521	427,872	44,258	.....	.....
South America (other) ¹	7,625	17,538	39,330	7,816	15,733	.....	.....
Total South America	860,037	535,330	294,253	1,519,231	91,383	.....	.....
WEST INDIES:							
Cuba	.....	128	550	.....	.....	.....	.....
Jamaica	.....	.....	.....	.....	.....	.....	.....
Netherlands West Indies	161,250	.....	47,597	94,432	51,176	215	..... 51,177 392 607
Trinidad/Tobago	64,057	24,707	53,846	2,769	5,673	.....	.....
West Indies (other) ¹	201	15,819	23,488	51,736	.....	9,963	..... 151,052 9,963 9,963
Total West Indies	225,508	40,654	127,481	148,937	56,849	10,178	..... 51,177 392 61,747

EUROPE:													
Belgium	181,333	41,081	59,926	98,059	25,571	405,970	3,993	32,547	58,128	45,561	140,229		
France	21,388	6,329	5,061	26,098	7,746	66,622	2,153	109,910	5,628	39,393	157,084		
Germany	126,801	32,491	49,601	52,217	7,556	268,666	45,025	6,664	11,343	25,072	88,104		
Italy	15,108	10,190	5,793	18,688	8,999	58,778	275	7,625	5,117	2,849	15,866		
Netherlands	88,014	4,840	3,697	15,405	9,011	120,967	64,480	15,030	45,850	20,337	145,897		
Norway	24,536	.....	.....	.....	.....	24,536	19,164	.....	.....	.....	19,164		
Spain-Portugal	49,838	3,104	22,794	19,492	9,159	104,387	5,250	148	.....	.....	5,577		
Sweden	39,867	5,770	16,612	7,674	786	70,709	78,317	.....	8,561	130	87,008		
United Kingdom	50,781	4,094	4,941	14,435	149	74,400	872	919	15,584	12,492	29,867		
U.S.S.R.	12,381	30,678	51,188	13,400	11,786	119,433	.....	.....	.....	.....	.....
Europe (other) ¹	134,408	69,132	76,786	70,390	99,310	450,026	58,161	54,943	4,353	99,183	216,640		
Total Europe	744,455	207,709	296,399	335,858	180,073	1,764,494	277,690	227,786	154,564	245,396	905,436		
ASIA (MIDDLE EAST)													
	90,273	.....	19,310	395	.....	109,978	6	.....	.....	1	7		
AFRICA													
	1,240	10,885	44,072	6,167	1,266	63,630	32	.....	157,514	24	157,570		
GRAND TOTAL	3,605,362	1,536,321	1,929,805	3,528,832	670,743	11,271,063	2,523,554	232,431	978,555	513,204	4,247,744		
Percent of Pacific-bound cargo	3.7	1.6	2.0	3.6	0.7	11.6	2.6	0.2	1.0	0.5	4.4		

Table 8.—Origin and Destination of Commercial Cargo through the Panama Canal from Atlantic to Pacific during Fiscal Year 1992
Segregated by Countries in Principal Trade Routes—Continued

[Long tons]

	To Asia										Grand total	Percent of total Pacific-bound cargo		
	China	Taiwan	Hong Kong	Indo-nesia	Japan	Philip-pine Islands	Singap-pore	South Korea	Thai-land	U.S.S.R.			Asia (other) ¹	Total
EAST COAST NORTH AMERICA:														
United States:														
North Atlantic ports	202,038	617,200	308,386	7,671	1,349,824	5,085	138,128	1,194,125	52,994	.....	503,352	4,378,803	5,483,862	5.7
South Atlantic ports	243,249	570,996	339,469	58,547	1,930,752	29,967	122,250	313,960	31,094	.....	243,062	3,883,346	5,052,489	5.2
Great Lakes ports	.....	20,966	.....	.....	.....	105	.....	19,535	.....	.....	14,824	55,430	55,883	0.1
Gulf ports	8,708,960	6,739,979	82,595	224,655	22,168,184	511,739	371,914	3,812,789	302,279	123,630	1,994,893	45,041,617	55,888,952	57.7
United States (other) ¹	115,951	529,222	288,860	9,553	965,263	36,960	72,702	433,713	11,677	12	369,534	2,833,447	3,550,969	3.7
Total United States	9,270,198	8,478,363	1,019,310	300,426	26,414,023	583,856	704,994	5,774,122	398,044	123,642	3,125,665	56,192,643	70,032,155	72.3
EAST COAST CANADA														
	236,292	260,528	88,084	.....	332,722	19,489	12,601	164,505	16,797	.....	147,992	1,279,010	1,976,532	2.0
EAST COAST CENTRAL AMERICA:														
Mexico	66,962	6,200	31,062	.....	7,255	1,490	11,605	32,769	60,037	.....	33,258	250,638	1,639,773	1.7
Panama	4,571	.....	.....	.....	.....	.....	157	.....	.....	.....	.....	4,728	433,467	0.4
Central America (other) ¹	.....	.....	.....	.....	4,729	.....	.....	.....	.....	.....	.....	4,729	16,911	0.0
Cristobal, R.P. ²	.....	200	1,000	.....	1,503	.....	.....	500	.....	.....	3,247	6,450	52,451	0.1
Total Central America	71,533	6,400	32,062	.....	13,487	1,490	11,762	33,269	60,037	.....	36,505	266,545	2,142,602	2.2
EAST COAST SOUTH AMERICA:														
Brazil	3,954	5,041	20,030	.....	579,407	.....	474	38,655	15,000	.....	14,761	677,322	1,742,137	1.8
Colombia	11,022	3,143	.....	.....	60,396	.....	.....	.....	.....	.....	.....	74,561	2,175,000	2.2
Venezuela	9,731	45,066	27,573	.....	899,556	.....	38	67,747	.....	.....	14,426	1,064,137	6,259,944	6.5
South America (other) ¹	16,654	667	1,237	.....	69,863	.....	1,911	11,077	.....	.....	376	101,785	309,934	0.3
Total South America	41,361	53,917	48,840	.....	1,609,222	.....	2,423	117,479	15,000	.....	29,563	1,917,805	10,487,015	10.8
WEST INDIES:														
Cuba	794,658	.....	.....	.....	342,054	.....	.....	51,671	.....	97,311	58,173	1,343,867	1,417,957	1.5
Jamaica	.....	30,275	39,598	.....	26,360	.....	12	14,499	.....	.....	2,378	113,122	146,005	0.2
Netherlands West Indies	.....	.....	364	.....	109,681	.....	6,507	38,654	.....	.....	1,679	156,885	766,797	0.8
Trinidad/Tobago	18,208	21,436	1,423	9,261	65,547	.....	93	133	.....	.....	653	116,754	626,756	0.6
West Indies (other) ¹	.....	20,176	.....	.....	13,094	.....	.....	66,360	.....	.....	22,236	121,866	483,478	0.5
Total West Indies	812,866	71,887	41,385	9,261	556,736	.....	6,612	171,317	.....	97,311	85,119	1,852,494	3,440,993	3.6

EUROPE:												
Belgium	.....	1,016	1,150	286	2,739	.....	1,392	66	.....	.....	6,649	1,009,386
France	.....	3,350	1,122	81	6,251	.....	74	5,947	.....	.....	16,825	473,040
Germany	.....	1,036	.....	.....	125,781	.....	14	3,242	.....	.....	130,073	876,549
Italy	.....	.....	18	.....	.....	.....	.....	.....	.....	1,849	1,867	387,387
Netherlands	.....	11,039	111	.....	29,485	.....	20	4,958	.....	5,793	51,406	775,929
Norway	.....	.....	.....	154	42,219	.....	.....	.....	.....	.....	42,373	260,094
Spain-Portugal	.....	773	21	.....	37,374	.....	.....	44	.....	.....	38,212	356,628
Sweden	.....	.....	.....	.....	.....	.....	15	.....	.....	143	158	209,862
United Kingdom	.....	400	24	.....	24,084	.....	24	1,478	.....	8,875	34,885	266,261
U.S.S.R.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	264,298
Europe (other) ¹	6,305	7,995	783	621	180,724	34	731	7,038	.....	58,126	262,357	2,252,486
Total Europe	6,705	25,233	3,205	1,142	448,657	34	2,270	22,773	.....	74,786	584,805	7,131,920
ASIA (MIDDLE EAST)												
.....	.....	18	4,412	2,958	.....	.....	2,437	4,865	.....	9,531	24,221	234,984
AFRICA												
.....	.....	.....	.....	.....	56,512	.....	375	.....	100	2,111	59,098	1,399,570
GRAND TOTAL	10,438,955	8,896,346	1,237,298	313,787	29,431,359	604,869	743,474	6,288,330	489,878	221,053	3,511,272	96,845,771
Percent of Pacific-bound cargo	10.8	9.2	1.3	0.3	30.4	0.6	0.8	6.5	0.5	0.2	3.6	64.2
											100.0%	100.0%

¹ Includes cargo not routed to permit segregation between definite countries.² Includes both local and transshipped cargo.

Table 9.—Origin and Destination of Commercial Cargo through the Panama Canal from Pacific to Atlantic during Fiscal Year 1992
Segregated by Countries in Principal Trade Routes

[Long tons]

	To East Coast United States					To E. C. Canada		To East Coast Central America				
	North Atlantic ports	South Atlantic ports	Great Lakes ports	Gulf ports	United States (other) ¹	Total	Canada	Mexico	Panama	Central America (other) ¹	Cristobal R. P. ²	Total
WEST COAST NORTH AMERICA:												
United States:												
Alaska.....	3,927	.....	.....	274,310	.....	278,237	10,418	.....	.....	.....	.....	89
Hawaii.....	29,196	.....	.....	33,690	.....	62,886	236	.....	.....	89	58,650	96,885
Mainland.....	216,012	86,694	.....	553,272	31,481	887,459	276,492	24,726	13,509	.....	.....	.....
Total United States.....	249,135	86,694	.....	861,272	31,481	1,228,582	287,146	24,726	13,509	89	58,650	96,974
WEST COAST CANADA.....												
.....	291,277	209,499	.....	572,424	165,483	1,238,683	3,065	138,215	.....	16,238	.....	154,453
WEST COAST CENTRAL AMERICA:												
Costa Rica.....	.....	989	.....	89,471	21,071	111,531	.....	8,263	.....	.....	176	8,439
El Salvador.....	25,237	.....	.....	70,591	13,975	109,803	.....	4,010	.....	.....	413	4,423
Guatemala.....	128,149	60,704	.....	279,955	127,084	595,892	.....	35,177	.....	.....	960	36,137
Honduras.....	596	.....	.....	9,883	.....	10,479	.....	.....	1,452	.....	1,892	3,344
Mexico.....	346,531	220,683	31,885	645,457	8,044	1,252,600	.....	369,058	.....	20	.....	408,903
Nicaragua.....	6,927	24,610	.....	63,360	21,872	116,769	.....	.....	750	.....	6,000	6,750
Panama.....	30,612	218	.....	42,827	3,205	76,862	.....	.....	.....	.....	350	350
Central America (other) ¹	24,500	.....	.....	24,510	.....	49,010	.....	.....	.....	601	3,940	4,541
Balboa, R. P. ²	2,271	1,484	.....	3,050	498	7,303	.....	.....	.....	.....	.....	.....
Total Central America.....	564,823	308,688	31,885	1,229,104	195,749	2,330,249	.....	416,508	2,202	621	53,576	472,907
WEST COAST SOUTH AMERICA:												
Chile.....	682,902	176,109	.....	470,277	221,719	1,551,007	23,240	59,019	.....	25,250	6,291	90,560
Colombia.....	98,127	35,292	.....	123,187	33,869	290,475	.....	1,457	.....	26,956	247	28,660
Ecuador.....	883,325	167,860	.....	708,219	93,353	1,852,757	53,222	5,864	995,285	52,068	1,229	1,054,446
Peru.....	710,885	191,355	.....	116,439	160,091	1,178,770	4,593	87,655	17,720	984	409	106,768
South America (other) ¹	142,994	61,350	.....	50,677	50,188	305,209	.....	12,469	.....	1,956	3,935	18,360
Total South America.....	2,518,233	631,966	.....	1,468,799	559,220	5,178,218	81,055	166,464	1,013,005	107,214	12,111	1,298,794

OCEANIA:											
Australia	533,384	120,174	22,638	980,218	156,693	1,813,107	399,562	41,951	.....	214	42,165
British Oceania	.....	15,501	.....	11,200	.....	26,701	.....	.....	.....	.....	.....
French Oceania	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
New Zealand	160,890	40,848	.....	53,864	85,280	340,882	12,440	31,749	.....	1,210	32,959
Oceania (other) ¹	82,119	28,923	.....	9,362	5,467	125,871	10,810	.....	.....	667	667
Total Oceania	776,393	205,446	22,638	1,054,644	247,440	2,306,561	422,812	73,700	.....	2,091	75,791
ASIA:											
China	231,137	26,045	14,218	961,320	35,013	1,267,733	123,178	12,879	.....	.....	12,879
Taiwan	375,876	235,350	.....	82,835	218,676	912,737	47,429	.....	787	38,305	39,092
Hong Kong	413,506	299,001	.....	2,129	168,802	883,438	56,411	.....	.....	126,868	126,868
Indonesia	134,195	29,383	33,265	201,554	97,446	495,843	96,498	.....	.....	.....	.....
Japan	1,901,632	921,133	241,665	2,167,673	578,488	5,810,591	33,719	112,537	3	5,282	46,570
Philippine Islands	40,446	50,732	.....	43,642	36,269	171,089	5,905	984	.....	132	1,116
Singapore	204,112	127,897	.....	47,785	64,503	444,297	21,749	.....	.....	34,551	34,551
South Korea	170,838	86,496	.....	566,966	231,624	1,055,924	24,087	3,543	.....	49,238	52,781
Thailand	23,248	.....	.....	33,169	.....	56,417	.....	15,983	.....	.....	15,983
U.S.S.R.	1,336	.....	.....	.....	.....	1,336	.....	.....	.....	.....	.....
Asia (other) ¹	767,753	459,709	.....	250,989	280,363	1,758,814	2,004	61,675	1,033	6,296	247,560
Total Asia	4,264,079	2,235,746	289,148	4,358,062	1,711,184	12,858,219	410,980	207,601	1,036	12,365	695,222
GRAND TOTAL	8,663,940	3,678,039	343,671	9,544,305	2,910,557	25,140,512	1,205,058	1,027,214	1,029,752	136,527	2,794,141

Percent of Atlantic-bound cargo 13.9 5.9 0.6 15.3 4.7 40.3 1.9 1.6 1.6 0.2 1.0 4.5

See footnotes at end of table.

OCEANIA:												
Australia	12,643	.....	2,424	20	969	27,923	3,744	42	10,575	.....	.....	32,317
British Oceania .....	.....	.....	.....	.....	.....	.....	.....	.....	222,389	.....	.....	.....
French Oceania	183,725	.....	.....	.....	7,355	13,346	17,694	6,200	59,681	.....	.....	26,749
New Zealand	17,399	.....	.....	349	93	790	3,057	.....	32,911	.....	.....	13,860
Oceania (other) ¹ .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	5,836
Total Oceania	213,767	.....	2,424	369	8,417	42,059	24,495	6,242	325,556	.....	.....	72,926
ASIA:												
China .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3,868
Taiwan	1,392	.....	7,334	.....	.....	.....	363	.....	3,697	.....	.....	20,947
Hong Kong .....	.....	.....	2,300	.....	.....	347	1,701	28	36	.....	.....	261
Indonesia .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	604
Japan	7,298	.....	18,677	124	.....	74,924	2,431	309	25,088	.....	.....	8,470
Philippine Islands .....	.....	.....	.....	.....	.....	3,678	.....	2,952	.....	.....	.....	.....
Singapore	2	.....	73	.....	.....	861	.....	18	150	.....	.....	1,130
South Korea	2,460	416	.....	2,000	45	4,147	596	.....	123	.....	.....	1,881
Thailand .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
U.S.S.R. .....	.....	.....	1,336	.....	.....	.....	1,968	.....	94	.....	.....	6,799
Asia (other) ¹	801	.....	5,134	.....	.....	6,035	.....	187	3,754	1,666	.....	1,838
Total Asia	11,953	416	.....	36,854	169	89,992	7,059	3,494	32,942	1,761	.....	24,851
GRAND TOTAL	3,381,401	81,635	2,424	817,557	2,193,235	2,979,278	1,634,039	233,969	2,582,769	322,391	112,183	2,445,259
Percent of Atlantic-bound cargo	5.4	0.1	0.0	1.3	3.5	4.8	2.6	0.4	4.1	0.5	0.2	3.9
												7.9
												34.8

See footnotes at end of table.

Table 9.—Origin and Destination of Commercial Cargo Through the Panama Canal from Pacific to Atlantic During Fiscal Year 1992
Segregated by Countries in Principal Trade Routes—Continued

	[Long tons]	To Africa						Percent of total Atlantic- bound cargo		
To Asia (Middle East)										
Asia (Middle East)		Algeria	Egypt	Morocco	South Africa	Tunisia (other) ¹	Total	Grand Total		
Alaska	6,455	.....	3,333	.....	.....	.....	3,333	892,542	1.4
Hawaii	.....	.....	.....	.....	.....	.....	.....	109,155	0.2
Mainland	195,781	86,937	1,387,480	33,417	43,304	46,149	148,485	1,745,772	10,510,160	16.8
Total United States	202,236	86,937	1,390,813	33,417	43,304	46,149	148,485	1,749,105	11,511,857	18.4
WEST COAST NORTH AMERICA:										
United States:										
Alaska										
Hawaii										
Mainland										
Total United States										
WEST COAST CANADA										
WEST COAST CENTRAL AMERICA:										
Costa Rica										
El Salvador										
Guatemala										
Honduras										
Mexico										
Nicaragua										
Panama										
Central America (other) ¹										
Bahoa, R.P. ²										
Total Central America										
WEST COAST SOUTH AMERICA:										
Chile										
Colombia										
Ecuador										
Peru										
South America (other) ¹										
Total South America										

OCEANIA:									
Australia	3,795	.....	.....	.....	.....	.....	.....	2,435,787	3.9
British Oceania .....	.....	.....	.....	.....	.....	.....	.....	281,095	0.5
French Oceania .....	.....	.....	.....	.....	.....	.....	.....	.....	0.0
New Zealand	591	4,279	.....	.....	4,481	9,791	18,551	889,520	1.4
Oceania (other) ¹	385	.....	.....	.....	.....	4,500	4,500	253,006	0.4
Total Oceania	4,771	4,279	.....	.....	4,481	14,291	23,051	3,859,408	6.2
ASIA:									
China .....	.....	.....	.....	.....	.....	.....	.....	1,978,863	3.2
Taiwan	49	.....	.....	.....	.....	.....	.....	1,050,362	1.7
Hong Kong	36	.....	.....	.....	.....	.....	.....	1,142,571	1.8
Indonesia .....	.....	.....	.....	.....	.....	.....	.....	595,014	1.0
Japan	1,532	.....	.....	.....	.....	178	5,766	6,562,540	10.5
Philippine Islands .....	.....	.....	.....	.....	.....	.....	.....	184,740	0.3
Singapore	29	.....	.....	.....	.....	.....	.....	504,549	0.8
South Korea .....	.....	.....	.....	.....	.....	.....	.....	1,201,376	1.9
Thailand .....	.....	.....	.....	.....	.....	.....	.....	148,290	0.2
U.S.S.R. ....	.....	.....	.....	.....	.....	.....	5,500	33,490	0.1
Asia (other) ¹ .....	.....	.....	.....	.....	.....	.....	.....	5,500	3.7
Total Asia	1,646	.....	.....	.....	.....	178	11,266	11,444	25.2
GRAND TOTAL	411,008	148,588	1,599,206	1,292,180	48,987	355,241	417,625	3,861,827	.....
Percent of Atlantic-bound cargo	0.7	0.2	2.6	2.1	0.1	0.6	0.7	6.2	100.0%

¹ Also includes cargo not routed to permit segregation between definite countries.
² Includes both local and transshipped cargo.

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO WEST COAST			
UNITED STATES:			
Canned and refrigerated foods, miscellaneous	6	1	.....
Chemicals and petroleum chemicals	968	603	541
Caustic soda	105	78	119
Chemicals, unclassified	725	397	332
Petroleum chemicals, miscellaneous	138	128	90
Grains .....	.....	.....	57
Soybeans .....	.....	.....	57
Lumber and products, miscellaneous	43	.....	.....
Machinery and equipment	19	1	.....
Automobiles, parts and accessories	4	1	.....
Construction machinery and equipment	15	.....	.....
Manufactures of iron and steel	4	2	.....
Angles, shapes and sections	1	.....	.....
Other and unclassified	3	2	.....
Ores and metals, miscellaneous .....	.....	6	.....
Petroleum and petroleum products	407	387	801
Crude oil .....	.....	.....	91
Diesel oil	10	.....	.....
Fuel oil, residual	40	68	29
Gasoline	128	77	339
Jet fuel	15	.....	35
Lubricating oil	185	212	271
Petroleum coke .....	.....	.....	36
Other and unclassified	29	30	.....
Miscellaneous	168	73	40
Carbon black	43	.....	.....
Wax paraffin	7	.....	.....
Container cargo	97	37	29
All other and unclassified	21	36	11
Total	1,615	1,073	1,439
EAST COAST UNITED STATES TO WEST COAST			
CANADA:			
Chemicals and petroleum chemicals	10	59	48
Chemicals, unclassified	4	30	4
Petroleum chemicals, miscellaneous	6	29	44
Lumber and products	20	.....	.....
Pulpwood	20	.....	.....
Machinery and equipment	5	.....	.....
Electrical machinery and apparatus	5	.....	.....
Manufactures of iron and steel .....	.....	16	.....
Plates, sheets and coils .....	.....	10	.....
Wire, bars and rods .....	.....	6	.....
Nitrates, phosphates and potash .....	.....	79	194
Phosphates .....	.....	79	194
Total	35	153	243
EAST COAST UNITED STATES TO WEST COAST			
CENTRAL AMERICA:			
Chemicals and petroleum chemicals	77	21	17
Caustic soda	8	8	5
Chemicals, unclassified	68	13	12

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EAST COAST UNITED STATES TO WEST COAST			
CENTRAL AMERICA—Continued			
Chemicals and petroleum chemicals—Continued			
Petroleum chemicals, miscellaneous	1	.....	.....
Coal and coke (excluding petroleum coke) .....	.....	36	.....
Coal .....	.....	36	.....
Grains	2,448	1,965	2,014
Barley	1	.....	.....
Corn	651	998	1,229
Rice	54	17	.....
Sorghum	729	218	272
Soybeans	410	202	152
Wheat	463	528	361
Other and unclassified	140	2	.....
Lumber and products, miscellaneous	2	.....	1
Machinery and equipment	2	.....	.....
Construction machinery and equipment	1	.....	.....
Electrical machinery and apparatus	1	.....	.....
Manufactures of iron and steel, miscellaneous .....	.....	8	9
Minerals, miscellaneous	10	2	.....
Soda and sodium compounds	3	2	.....
Sulfur	7	.....	.....
Nitrates, phosphates and potash	542	1,091	1,328
Ammonium compounds	136	164	181
Phosphates	191	799	989
Potash	34	23	4
Fertilizers, unclassified	181	105	154
Ores and metals	75	27	113
Ores, miscellaneous	3	6	.....
Metals	72	21	113
Scrap	72	21	113
Other agricultural commodities .....	.....	4	38
Oilseeds .....	.....	4	26
Sugar .....	.....	.....	12
Petroleum products	470	370	363
Diesel oil	259	173	144
Fuel oil, residual	21	.....	.....
Gasoline	139	143	196
Jet fuel	27	15	8
Kerosene	4	2	8
Liquefied gas	14	6	5
Lubricating oil	6	2	.....
Other and unclassified .....	.....	29	2
Miscellaneous	126	146	83
Carbon black	1	.....	.....
Flour, wheat	20	.....	.....
Groceries, miscellaneous .....	.....	3	.....
Oil, vegetable	20	24	17
Paper and paper products	26	49	28

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO WEST COAST			
CENTRAL AMERICA—Continued			
Miscellaneous—Continued			
Tallow	42	69	37
Container cargo	5	.....	.....
All other and unclassified	12	1	1
Total	<u>3,752</u>	<u>3,670</u>	<u>3,966</u>
EAST COAST UNITED STATES TO WEST COAST			
SOUTH AMERICA:			
Canned and refrigerated foods	13	7	4
Canned foods	2	.....	.....
Milk	2	.....	.....
Refrigerated foods	11	7	4
Meat	1	.....	.....
Other and unclassified	10	7	4
Chemicals and petroleum chemicals	299	273	275
Caustic soda	116	113	81
Chemicals, unclassified	143	136	181
Petroleum chemicals, miscellaneous	40	24	13
Coal and coke (excluding petroleum coke)	24	173	525
Coal	24	173	525
Grains	1,349	1,615	1,514
Corn	695	504	349
Oats	7	.....	1
Rice	50	59	174
Sorghum	68	54	30
Soybeans	57	24	90
Wheat	467	949	865
Other and unclassified	5	25	5
Lumber and products	3	9	4
Plywood, veneers, composition board .....	.....	.....	1
Pulpwood	2	8	2
Other and unclassified	1	1	1
Machinery and equipment	107	61	74
Agricultural machinery and implements	6	12	15
Automobiles, trucks, accessories and parts	79	31	28
Construction machinery and equipment	10	11	18
Electrical machinery and apparatus	2	2	7
Other and unclassified	10	5	6
Manufactures of iron and steel	89	61	45
Angles, shapes and sections	3	11	5
Nails, tacks and spikes	11	.....	.....
Plates, sheets and coils	3	3	4
Tubes, pipes and fittings	10	16	5
Wire, bars and rods	44	31	28
Other and unclassified	18	.....	3
Minerals, miscellaneous	15	17	22
Asbestos .....	.....	2	.....
Soda and sodium compounds	15	15	18
Sulfur .....	.....	.....	4
Nitrates, phosphates and potash	632	583	452
Ammonium compounds	23	28	14
Fishmeal .....	.....	13	.....
Phosphates	335	178	197

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO WEST COAST			
SOUTH AMERICA—Continued			
Nitrates, phosphates and potash—Continued			
Potash	61	33	35
Fertilizers, unclassified	213	331	206
Ores and metals	117	107	63
Ores	20	17	18
Alumina/bauxite	7	.....	1
Other and unclassified	13	17	17
Metals	97	90	45
Aluminum	3	1	18
Iron .....	.....	.....	1
Scrap	94	89	26
Other agricultural commodities	101	89	51
Beans, edible	7	8	6
Copra and coconuts .....	.....	.....	1
Cotton, raw	2	.....	1
Oilseeds .....	.....	1	.....
Peas, dry	3	5	3
Rubber, raw	1	1	1
Skin and hides	1	.....	3
Sugar	87	74	36
Petroleum products	428	387	352
Diesel oil	110	220	202
Fuel oil, residual	77	37	.....
Gasoline	70	73	39
Jet fuel	29	.....	42
Kerosene	29	.....	27
Liquefied gas	64	37	7
Lubricating oil	21	20	34
Other and unclassified	28	.....	1
Miscellaneous	1,609	1,327	979
Bricks and tile	1	.....	1
Carbon black	1	.....	.....
Clay, fire and china	2	6	5
Fibers, plant .....	.....	.....	1
Flour, wheat	59	82	73
Glass and glassware	1	.....	1
Groceries, miscellaneous .....	.....	1	2
Liquors and wines	1	.....	.....
Marble and stone	10	.....	.....
Oil, coconut	1	6	6
Oil, fish .....	.....	1	.....
Oil, vegetable	33	34	30
Paper and paper products	268	248	187
Resin	20	16	19
Rubber, manufactured	4	5	3
Seeds, excluding oilseeds	2	.....	.....
Tallow	63	54	34
Textiles	5	4	3
Container cargo	1,014	766	548
All other and unclassified	124	104	66
Total	4,786	4,709	4,360
EAST COAST UNITED STATES TO BALBOA, R.P.:			
Canned and refrigerated foods, miscellaneous .....	.....	2	5

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO BALBOA, R.P.—			
Continued			
Chemicals and petroleum chemicals	19	10	11
Caustic soda	4	4	4
Chemicals, unclassified	14	5	6
Petroleum chemicals, miscellaneous	1	1	1
Grains	242	182	113
Corn	108	62	32
Soybeans	48	36	25
Wheat	81	84	55
Other and unclassified	5	.....	1
Minerals, miscellaneous .....	.....	.....	2
Nitrates, phosphates and potash	3	3	.....
Potash .....	.....	2	.....
Fertilizers, unclassified	3	1	.....
Ores and metals	7	4	9
Ores	7	4	9
Alumina/Bauxite	1	.....	.....
Manganese .....	.....	.....	3
Other and unclassified	6	4	6
Petroleum products	296	263	249
Diesel oil	91	97	84
Fuel oil, residual	181	160	143
Gasoline	22	2	20
Jet fuel	1	.....	1
Kerosene .....	.....	3	.....
Other and unclassified	1	1	1
Miscellaneous	41	36	41
Groceries, miscellaneous	1	5	2
Oil, vegetable	13	10	4
Tallow	7	1	2
Container cargo	13	19	27
All other and unclassified	7	1	6
Total	608	500	429
EAST COAST UNITED STATES TO HAWAII:			
Machinery and equipment .....	.....	.....	9
Electrical machinery and apparatus .....	.....	.....	9
Petroleum products .....	.....	.....	31
Jet fuel .....	.....	.....	31
Miscellaneous	4	.....	.....
All other and unclassified	4	.....	.....
Total	4	.....	40
EAST COAST UNITED STATES TO OCEANIA:			
Canned and refrigerated foods	22	10	16
Refrigerated foods	22	10	16
Other and unclassified	22	10	16
Chemicals and petroleum chemicals	659	828	648
Caustic soda	433	688	517
Chemicals, unclassified	188	132	116
Petroleum coke, miscellaneous	38	8	15
Coal and coke (excluding petroleum coke) .....	.....	14	32
Coke .....	.....	14	32

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO OCEANIA—			
Continued			
Grains	169	131	94
Corn	2	11	18
Sorghum .....	.....	.....	3
Soybeans	167	115	60
Wheat .....	.....	5	.....
Other and unclassified .....	.....	.....	13
Lumber and products	18	14	22
Pulpwood	18	14	22
Machinery and equipment	6	7	15
Agricultural machinery and equipment	2	2	2
Automobiles, trucks, accessories and parts	1	2	11
Construction machinery and equipment	3	2	1
Other and unclassified .....	.....	1	1
Manufactures of iron and steel	2	42	11
Angles, shapes and sections	1	1	1
Plates, sheets and coils .....	.....	39	6
Tubes, pipes and fittings .....	.....	2	3
Wire, bars and rods .....	.....	.....	1
Other and unclassified	1	.....	.....
Minerals, miscellaneous .....	.....	18	39
Soda and sodium compounds .....	.....	18	39
Nitrates, phosphates and potash	1,106	905	885
Ammonium compounds	67	13	9
Phosphates	814	623	483
Potash	33	35	42
Fertilizers, unclassified	192	234	351
Ores and metals	31	39	15
Ores	29	39	8
Alumina/bauxite .....	.....	2	3
Lead .....	.....	15	.....
Zinc	29	6	5
Other and unclassified .....	.....	16	.....
Metals	2	.....	7
Aluminum	2	.....	2
Zinc .....	.....	.....	5
Other agricultural commodities, miscellaneous .....	.....	.....	9
Petroleum products	280	377	274
Diesel oil	33	.....	.....
Fuel oil, residual	3	46	3
Gasoline	36	66	35
Liquefied gas	54	60	35
Lubricating oil	13	28	25
Petroleum coke	140	173	133
Other and unclassified	1	4	43
Miscellaneous	747	618	632
Bricks and tile	5	.....	.....
Carbon black .....	.....	3	.....
Clay, fire and china	25	29	37
Groceries, miscellaneous	3	.....	.....
Oil, vegetable	1	2	1
Paper and paper products	19	12	11
Porcelainware	9	.....	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO OCEANIA—			
Continued			
Miscellaneous—Continued			
Resin	10	13	3
Rubber, manufactured .....	.....	.....	6
Container cargo	641	535	555
All other and unclassified	34	24	19
Total	<u>3,040</u>	<u>3,003</u>	<u>2,692</u>
EAST COAST UNITED STATES TO ASIA:			
Canned and refrigerated foods	<u>438</u>	<u>408</u>	<u>298</u>
Canned foods	<u>4</u>	<u>.....</u>	<u>12</u>
Fruit	2	.....	2
Canned food, miscellaneous	2	.....	10
Refrigerated foods:	<u>434</u>	<u>408</u>	<u>286</u>
Bananas .....	.....	1	.....
Dairy products	5	.....	.....
Fish .....	.....	.....	1
Fruit, excluding bananas	130	136	44
Meat	7	10	2
Other and unclassified	292	261	239
Chemicals and petroleum chemicals	<u>3,734</u>	<u>4,377</u>	<u>3,605</u>
Caustic soda	38	75	138
Chemicals, unclassified	2,718	2,652	2,262
Petroleum chemicals, miscellaneous	978	1,650	1,205
Coal and coke (excluding petroleum coke)	<u>3,849</u>	<u>3,651</u>	<u>4,205</u>
Coal	3,841	3,377	4,153
Coke	8	274	52
Grains	<u>25,074</u>	<u>25,085</u>	<u>23,835</u>
Barley	56	.....	.....
Corn	12,868	13,404	12,348
Oats	14	16	.....
Rice	8	6	13
Sorghum	1,143	1,426	1,718
Soybeans	6,508	5,847	5,625
Wheat	4,206	4,024	3,934
Other and unclassified	271	362	197
Lumber and products	<u>4,341</u>	<u>3,350</u>	<u>2,301</u>
Boards and planks	65	147	9
Plywood, veneers, composition board	1	.....	.....
Pulpwood	1,257	744	728
Other and unclassified	3,018	2,459	1,564
Machinery and equipment	<u>142</u>	<u>69</u>	<u>45</u>
Agricultural machinery and equipment	6	2	8
Automobiles, trucks, accessories and parts	19	13	8
Construction machinery and equipment	41	31	19
Electrical machinery and apparatus	7	3	3
Motorcycles, bicycles and parts	53	.....	.....
Other and unclassified	16	20	7
Manufactures of iron and steel	<u>718</u>	<u>2,140</u>	<u>1,203</u>
Angles, shapes and sections	64	117	85
Nails, tacks and coils	1	.....	.....
Plates, sheets and coils	391	1,466	900
Tubes, pipes and fittings	92	77	10
Wires, bars and rods	16	236	100

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EAST COAST UNITED STATES TO ASIA—			
Continued			
Manufactures of iron and steel—Continued			
Other and unclassified	154	244	108
Minerals, miscellaneous	2	12	65
Asbestos .....	.....	1	2
Soda and sodium compounds	2	11	9
Sulfur .....	.....	.....	54
Nitrates, phosphates and potash	6,631	6,924	5,361
Ammonium compounds	95	240	8
Phosphates	5,834	6,134	4,956
Potash	166	228	93
Fertilizers, unclassified	536	322	304
Ores and metals	1,401	2,050	1,958
Ores	60	67	56
Alumina/bauxite	12	12	9
Copper	18	20	31
Lead	5	.....	.....
Manganese .....	.....	14	.....
Zinc	5	5	7
Other and unclassified	20	16	9
Metals	1,341	1,983	1,902
Aluminum .....	.....	1	.....
Copper	1	.....	6
Iron	105	52	3
Lead .....	.....	.....	3
Scrap	1,200	1,917	1,853
Tin, including tinplate	2	.....	.....
Zinc .....	.....	5	.....
Other and unclassified	33	8	37
Other agricultural commodities	66	86	125
Beans, edible .....	.....	2	67
Cotton, raw	25	62	45
Molasses	6	15	11
Oilseeds	35	1	2
Peas, dry .....	.....	6	.....
Petroleum products	2,096	2,921	1,836
Diesel oil	163	269	273
Fuel oil, residual	78	383	93
Gasoline	341	381	55
Jet fuel	217	448	289
Kerosene .....	.....	194	66
Liquefied gas	360	535	319
Lubricating oil	174	129	104
Petroleum coke	755	575	591
Other and unclassified	8	7	46
Miscellaneous	7,701	7,934	7,229
Bricks and tile	8	.....	.....
Carbon black	59	38	21
Cement .....	.....	.....	4
Clay, fire and china	589	542	535
Flour, wheat	96	37	.....
Groceries, miscellaneous	35	31	43
Marble and stone	32	35	16
Oil, vegetable	91	64	67

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST UNITED STATES TO ASIA—			
Continued			
Miscellaneous—Continued			
Paper and paper products	495	473	292
Porcelainware .....	.....	5	.....
Resin	10	13	14
Rubber, manufactured .....	.....	.....	6
Seeds, excluding oilseeds	55	.....	.....
Tallow	5	2	.....
Wax, paraffin .....	.....	.....	8
Container cargo	6,057	6,495	6,117
All other and unclassified	169	199	106
Total	<u>56,193</u>	<u>59,007</u>	<u>52,066</u>
EAST COAST CANADA TO WEST COAST UNITED STATES:			
Canned and refrigerated foods, miscellaneous	1	.....	1
Miscellaneous	89	49	53
Container cargo	89	45	53
All other and unclassified .....	.....	4	.....
Total	<u>90</u>	<u>49</u>	<u>54</u>
EAST COAST CANADA TO WEST COAST CENTRAL AMERICA:			
Canned and refrigerated foods	3	4	2
Canned foods	3	1	1
Fish	1	.....	1
Milk .....	.....	1	.....
Vegetables, canned	2	.....	.....
Refrigerated foods, miscellaneous .....	.....	3	1
Coal and coke (excluding petroleum coke)	275	33	.....
Coal	275	33	.....
Grains	10	14	8
Corn	4	5	8
Wheat	6	9	.....
Lumber and products, miscellaneous .....	.....	.....	4
Manufactures of iron and steel .....	.....	30	.....
Wire, bars and rods .....	.....	30	.....
Nitrates, phosphates and potash .....	.....	14	6
Other agricultural commodities	1	1	1
Beans, edible	1	1	1
Miscellaneous	8	13	8
Flour, wheat	2	2	2
Oil, vegetable .....	.....	2	1
Paper and paper products	5	9	4
All other and unclassified	1	.....	1
Total	<u>297</u>	<u>109</u>	<u>28</u>
EAST COAST CANADA TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods	2	3	1
Canned foods	2	3	1
Fish .....	.....	1	.....
Milk	2	2	1
Coal and coke (excluding petroleum coke) .....	.....	77	98

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST CANADA TO WEST COAST SOUTH AMERICA—Continued			
Coal and coke (excluding petroleum coke)—Continued			
Coal		77	98
Grain	134	74	.....
Wheat	134	73	.....
All other and unclassified		1	.....
Machinery and equipment, miscellaneous		1	2
Manufactures of iron and steel		20	19
Plates, sheets and coils			4
Wire, bars and rods		14	15
All other and unclassified		6	.....
Minerals, miscellaneous	9	10	4
Asbestos	9	10	4
Nitrates, phosphates and potash	24	37	73
Phosphates		16	10
Potash	24	21	63
Other agricultural commodities, miscellaneous	2	1	.....
Miscellaneous	59	24	30
Flour, wheat	3	10	9
Groceries, miscellaneous	1	.....	.....
Paper and paper products	40	11	15
Resin	1	.....	.....
Container cargo	8	.....	3
All other and unclassified	6	3	3
Total	230	247	227
EAST COAST CANADA TO OCEANIA:			
Canned and refrigerated foods, miscellaneous		3	14
Lumber and products, miscellaneous .....		.....	1
Manufactures of iron and steel, miscellaneous .....		.....	7
Nitrates, phosphates and potash	30	49	30
Phosphates		17	.....
Potash	30	32	30
Ores and metals	10	.....	.....
Ores	10	.....	.....
Alumina/bauxite	10	.....	.....
Miscellaneous	40	85	154
Paper and paper products	4	.....	32
Container cargo	36	82	122
All other and unclassified .....	.....	3	.....
Total	80	137	206
EAST COAST CANADA TO ASIA:			
Canned and refrigerated foods	37	49	59
Canned foods	1	.....	.....
Fruit	1	.....	.....
Refrigerated foods	36	49	59
Fish	21	39	50
Other and unclassified	15	10	9
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	7
Grains	5	152	116
Sorghum .....	.....	8	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST CANADA TO ASIA—Continued			
Grains—Continued			
Soybeans	5	37	10
Wheat .....	.....	107	106
Lumber and products	137	155	184
Plywood, veneers, composition board .....	.....	7	.....
Pulpwood	132	142	165
Other and unclassified	5	6	19
Machinery and equipment	5	5	7
Agricultural machinery and equipment .....	.....	.....	2
Construction machinery and equipment	1	1	2
Other and unclassified	4	4	3
Manufactures of iron and steel	348	714	383
Angles, shapes and sections	17	48	37
Plates, sheets and coils	230	435	154
Tubes, pipes and fittings	31	42	.....
Wire, bars and rods	45	87	59
Other and unclassified	25	102	133
Minerals, miscellaneous	3	6	.....
Asbestos	3	6	.....
Nitrates, phosphates and potash	189	212	96
Potash	189	212	96
Ores and metals	73	135	225
Ores	26	51	77
Copper	5	5	25
Zinc .....	.....	6	10
Other and unclassified	21	40	42
Metals	47	84	148
Aluminum .....	.....	8	.....
Copper	3	.....	1
Iron	17	.....	.....
Lead	2	1	1
Scrap	24	73	146
Zinc .....	.....	2	.....
Other and unclassified	1	.....	.....
Petroleum products .....	.....	81	126
Diesel oil .....	.....	28	.....
Fuel oil, residual .....	.....	.....	93
Gasoline .....	.....	26	.....
Jet fuel .....	.....	27	25
Lubricating oil .....	.....	.....	8
Miscellaneous	482	456	450
Clay, fire and china .....	.....	22	.....
Marble and stone	82	51	42
Paper and paper products	113	104	166
Slag, clinkers and dross	5	46	30
Container cargo	271	217	209
All other and unclassified	11	16	3
Total	1,279	1,965	1,653
EAST COAST CENTRAL AMERICA TO WEST COAST UNITED STATES:			
Machinery and equipment	3	.....	.....
Automobiles, trucks, accessories and parts	3	.....	.....
Petroleum products .....	.....	87	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST CENTRAL AMERICA TO WEST COAST			
UNITED STATES:—Continued			
Petroleum products—Continued			
Diesel oil		4	.....
Fuel oil, residual		83	.....
Miscellaneous .....		.....	64
Cement .....		.....	64
Total	3	87	64
EAST COAST CENTRAL AMERICA TO WEST COAST			
CENTRAL AMERICA:			
Lumber and products, miscellaneous		20	.....
Manufactures of iron and steel	1	.....	2
Tubes, pipes and fittings	1	.....	2
Nitrates, phosphates and potash	224	199	338
Ammonium compounds		22	41
Phosphates		9	28
Fertilizers, unclassified	224	168	269
Petroleum and petroleum products	817	671	872
Asphalt		19	22
Crude oil	311	278	435
Diesel oil	35	2	90
Fuel oil, residual	41	.....	19
Gasoline	23	55	64
Liquefied gas	407	317	226
Other and unclassified .....		.....	16
Miscellaneous	2	2	14
Cement .....		.....	13
Container cargo .....		.....	1
All other and unclassified	2	2	.....
Total	1,044	892	1,226
EAST COAST CENTRAL AMERICA TO WEST COAST			
SOUTH AMERICA:			
Chemicals and petroleum chemicals	11	4	3
Caustic soda	1	.....	.....
Chemicals, unclassified	9	4	3
Petroleum chemicals, miscellaneous	1	.....	.....
Machinery and equipment	1	.....	2
Automobiles, trucks, accessories and parts	1	.....	1
Electrical machinery and apparatus .....		.....	1
Manufactures of iron and steel	22	6	7
Angles, shapes and sections		1	.....
Tubes, pipes and fittings	20	5	6
Wire, bars and rods .....		.....	1
Other and unclassified	2	.....	.....
Minerals, miscellaneous	1	1	1
Soda and sodium compounds	1	1	1
Nitrates, phosphates and potash	147	57	90
Phosphates	1	1	4
Fertilizers, miscellaneous	146	56	86
Ores and metals	2	6	6
Ores	1	6	3
Manganese		2	2

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST CENTRAL AMERICA TO WEST COAST			
SOUTH AMERICA—Continued			
Ores and metals—Continued			
Ores—Continued			
Other and unclassified	1	4	1
Metals	1	.....	3
Aluminum	1	.....	.....
Scrap .....	.....	.....	3
Other agricultural commodities	2	14	2
Rubber, raw	2	1	2
Sugar .....	.....	13	.....
Petroleum products	93	125	268
Diesel oil .....	.....	28	140
Fuel oil, residual	26	.....	32
Gasoline .....	.....	3	.....
Jet fuel	6	.....	9
Liquefied gas	61	94	87
Miscellaneous	105	90	71
Bricks and tile	1	.....	.....
Fibers, plant	1	.....	.....
Glass and glassware	1	.....	.....
Paper and paper products	9	11	1
Resin	7	1	1
Rubber, manufactured	2	4	3
Textiles	2	1	1
Container cargo	61	50	52
All other and unclassified	21	23	13
Total	384	303	450
EAST COAST CENTRAL AMERICA TO BALBOA, R.P.:			
Lumber and products, miscellaneous .....	.....	.....	1
Petroleum and petroleum products	394	122	121
Crude oil	6	.....	.....
Diesel oil	91	26	25
Fuel, oil, residual	297	97	91
Jet fuel .....	.....	.....	5
Miscellaneous	2	.....	.....
Container cargo	1	.....	.....
All other and unclassified	1	.....	.....
Total	396	122	122
EAST COAST CENTRAL AMERICA TO ASIA:			
Canned and refrigerated foods	5	4	3
Refrigerated foods	5	4	3
Bananas	5	4	2
Fish .....	.....	.....	1
Chemicals and petroleum chemicals	30	36	27
Chemicals, unclassified	25	31	27
Petroleum chemicals, miscellaneous	5	5	.....
Machinery and equipment, miscellaneous .....	.....	2	.....
Manufactures of iron and steel	28	34	86
Angles, shapes and sections .....	.....	.....	3
Plates, sheets and coils	1	2	42
Tubes, pipes and fittings	17	32	36

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST CENTRAL AMERICA TO ASIA—			
Continued			
Manufactures of iron and steel—Continued			
Other and unclassified	10	.....	5
Nitrates, phosphates and potash	57	213	124
Fertilizers, unclassified	57	213	124
Ores and metals	2	9	2
Ores	2	4	2
Manganese	2	4	2
Metals .....	.....	5	.....
Iron .....	.....	5	.....
Other agricultural commodities	4	1	1
Cotton, raw .....	.....	1	.....
Rubber, raw	4	.....	1
Petroleum products	52	66	87
Diesel oil	50	.....	27
Gasoline .....	.....	24	.....
Jet fuel .....	.....	10	.....
Liquefied gas .....	.....	32	60
Lubricating oil	2	.....	.....
Miscellaneous	82	39	74
Cement	27	.....	.....
Paper and paper products	5	.....	.....
Resin	33	30	16
Container cargo .....	.....	2	54
All other and unclassified	17	7	4
Total	260	404	403
EAST COAST SOUTH AMERICA TO WEST COAST			
UNITED STATES:			
Canned and refrigerated foods	2	2	2
Refrigerated foods, miscellaneous	2	2	2
Chemicals and petroleum chemicals	72	48	.....
Chemicals, unclassified	72	27	.....
Petroleum chemicals, miscellaneous .....	.....	21	.....
Lumber and products	46	48	56
Boards and planks	2	2	6
Plywood, veneers, composition board	2	3	6
Pulpwood	42	42	42
Other and unclassified .....	.....	1	2
Machinery and equipment, miscellaneous .....	.....	.....	4
Manufactures of iron and steel	742	665	584
Angles, shapes and sections	4	.....	.....
Nails, tacks and spikes .....	.....	.....	1
Plates, sheets and coils	529	599	483
Tubes, pipes and fittings	1	6	5
Wire, bars and rods	76	13	29
Other and unclassified	132	47	66
Ores and metals	83	83	68
Ores	46	64	66
Alumina/bauxite	11	11	42
Iron .....	.....	53	24
Other and unclassified	35	.....	.....
Metals	37	19	2

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST SOUTH AMERICA TO WEST COAST			
UNITED STATES—Continued			
Ores and metals—Continued			
Metals—Continued			
Aluminum			2
Iron	37	19	
Other agricultural commodities	3		8
Beans, edible			1
Cocoa and cacao beans	3		3
Coffee			4
Petroleum and petroleum products	1,534	1,412	786
Crude oil	798	422	286
Diesel oil		77	
Fuel oil, residual	548	658	49
Gasoline		71	329
Jet fuel	175	84	122
Other and unclassified	13	100	
Miscellaneous	252	604	250
Bricks and tile			1
Cement	97	432	114
Oil, vegetable		34	
Paper and paper products	3	3	9
Slag, clinkers and dross			23
Container cargo	144	127	92
All other and unclassified	8	8	11
Total	2,734	2,862	1,758
EAST COAST SOUTH AMERICA TO WEST COAST			
CANADA:			
Lumber and products	1	2	6
Boards and planks	1		1
Plywood, veneers, composition board		2	1
Pulpwood			4
Manufactures of iron and steel	40	56	72
Nails, tacks and spikes	1		
Plates, sheets and coils	17	20	27
Tubes, pipes and fittings	3	13	10
Wire, bars and rods	15	20	31
Other and unclassified	4	3	4
Ores and metals, miscellaneous	6		3
Other agricultural commodities, miscellaneous			1
Miscellaneous	25	87	88
Bricks and tile			1
Cement		38	20
Paper and paper products	1	1	2
Slag, clinkers and dross	10	37	27
Container cargo	14	8	29
All other and unclassified		3	9
Total	72	145	170
EAST COAST SOUTH AMERICA TO WEST COAST			
CENTRAL AMERICA:			
Canned and refrigerated foods	1	1	
Refrigerated foods	1	1	
Fish	1	1	

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST SOUTH AMERICA TO WEST COAST			
CENTRAL AMERICA—Continued			
Chemicals and petroleum chemicals, miscellaneous			1
Coal and coke (excluding petroleum coke)	132	71	.....
Coal	132	71	.....
Lumber and products	2	2	.....
Boards and planks	1	1	.....
Plywood, veneers, composition board	1	1	.....
Manufactures of iron and steel	261	175	133
Angles, shapes and sections	9	.....	11
Plates, sheets and coils	61	65	36
Wire, bars and rods	93	80	18
Other and unclassified	98	30	68
Nitrates, phosphates and potash	23	48	19
Ammonium compounds			14
Fertilizers, unclassified	23	48	5
Ores and metals	7	9	20
Ores	5	3	.....
Manganese	2	.....	.....
Other and unclassified	3	3	.....
Metals	2	6	20
Aluminum	1	2	1
Iron			18
Tin, including tinplate	1	3	1
Zinc	1	1	.....
Other agricultural commodities		55	81
Sugar		55	81
Petroleum and petroleum products	1,576	1,432	1,552
Crude oil	1,357	1,241	935
Diesel oil			48
Fuel oil, residual	182	.....	493
Gasoline	36	148	30
Liquefied gas			4
Lubricating oil	1	.....	.....
Other and unclassified		43	42
Miscellaneous	60	25	30
Bricks and tile			1
Glass and glassware			1
Oil, vegetable	7	10	5
Paper and paper products	2	.....	1
Slag, clinkers and dross	16	.....	.....
Container cargo	23	11	21
All other and unclassified	12	4	1
Total	2,062	1,818	1,836
EAST COAST SOUTH AMERICA TO WEST COAST			
SOUTH AMERICA:			
Canned and refrigerated foods, miscellaneous			4
Chemicals and petroleum chemicals	19	21	32
Caustic soda		4	.....
Chemicals, unclassified	14	11	29
Petroleum chemicals, miscellaneous	5	6	3
Coal and coke (excluding petroleum coke)	86	488	152
Coal	77	464	149

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EAST COAST SOUTH AMERICA TO WEST COAST			
SOUTH AMERICA—Continued			
Coal and coke (excluding petroleum coke)—Continued			
Coke	9	24	3
Grains	9	27	1
Oats	1	1	1
Rice .....	.....	21	.....
Soybeans	8	5	.....
Lumber and products	5	3	2
Pulpwood	5	2	2
Other and unclassified .....	.....	1	.....
Machinery and equipment	8	8	8
Agricultural machinery and equipment	1	2	1
Automobiles, trucks, accessories and parts	6	5	4
Construction machinery and equipment .....	.....	.....	2
Electrical machinery and apparatus	1	1	1
Manufactures of iron and steel	185	133	134
Angles, shapes and sections	6	3	27
Plates, sheets and coils	60	45	20
Tubes, pipes and fittings	3	10	10
Wire, bars and rods	89	62	66
Other and unclassified	27	13	11
Minerals, miscellaneous	31	28	36
Asbestos .....	.....	1	1
Salt	31	26	28
Soda and sodium compounds .....	.....	1	1
Sulfur .....	.....	.....	6
Nitrates, phosphates and potash	246	93	127
Ammonium compounds	23	17	33
Phosphates	5	1	3
Fertilizers, unclassified	218	75	91
Ores and metals	27	27	24
Ores	8	14	12
Alumina/bauxite	7	14	11
Manganese	1	.....	1
Metals	19	13	12
Aluminum	3	3	3
Iron	6	5	6
Scrap	3	.....	.....
Tin, including tinplate	7	4	1
Other and unclassified .....	.....	1	2
Other agricultural commodities	1	35	39
Cotton, raw	1	1	1
Rubber, raw .....	.....	.....	1
Sugar .....	.....	34	37
Petroleum and petroleum products	2,485	2,080	1,198
Asphalt .....	.....	.....	1
Crude oil	1,660	1,166	742
Diesel oil	194	180	31
Fuel oil, residual	68	24	.....
Gasoline	470	361	173
Jet fuel	25	38	.....
Liquefied gas	32	231	204
Lubricating oil	36	80	47

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST SOUTH AMERICA TO WEST COAST SOUTH AMERICA—Continued			
Miscellaneous	198	161	89
Bricks and tile	1	1	.....
Carbon black	7	40	7
Cement	5	.....	.....
Glass and glassware	2	2	1
Paper and paper products	11	23	8
Resin	5	7	11
Rubber, manufactured .....	.....	1	1
Slag, clinkers and dross	21	.....	.....
Textiles .....	.....	1	.....
Container cargo	121	68	39
All other and unclassified	25	18	22
Total	<u>3,300</u>	<u>3,104</u>	<u>1,845</u>
EAST COAST SOUTH AMERICA TO BALBOA, R.P.:			
Canned and refrigerated foods, miscellaneous .....	.....	.....	1
Manufactures of iron and steel, miscellaneous	1	1	.....
Petroleum and petroleum products	96	56	3
Asphalt .....	.....	.....	2
Crude oil	20	.....	.....
Diesel oil	24	.....	.....
Fuel oil, residual	50	46	.....
Liquefied gas	2	.....	.....
Lubricating oil .....	.....	10	1
Miscellaneous	2	4	4
Oil, vegetable .....	.....	3	3
Container cargo	2	1	1
Total	<u>99</u>	<u>61</u>	<u>9</u>
EAST COAST SOUTH AMERICA TO HAWAII:			
Petroleum and petroleum products	193	114	61
Crude oil	66	17	.....
Diesel oil .....	.....	6	.....
Jet fuel	127	60	61
Other and unclassified .....	.....	31	.....
Miscellaneous	109	173	108
Cement	109	51	57
Slag, clinkers and dross .....	.....	121	51
All other and unclassified .....	.....	1	.....
Total	<u>302</u>	<u>287</u>	<u>168</u>
EAST COAST SOUTH AMERICA TO OCEANIA:			
Ores and metals, miscellaneous .....	.....	3	3
Miscellaneous .....	.....	.....	2
Container cargo .....	.....	.....	1
All other and unclassified .....	.....	.....	1
Total .....	.....	<u>3</u>	<u>6</u>
EAST COAST SOUTH AMERICA TO ASIA:			
Canned and refrigerated foods	18	17	55
Canned foods, miscellaneous .....	.....	2	.....
Refrigerated foods	18	15	55
Bananas	4	2	4

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST SOUTH AMERICA TO ASIA—Continued			
Canned and refrigerated foods—Continued			
Refrigerated foods—Continued			
Fish.....	13	13	38
Meat.....	1	.....	6
Other and unclassified.....	.....	.....	7
Chemicals and petroleum chemicals.....	33	29	22
Chemicals, unclassified.....	13	20	22
Petroleum chemicals, miscellaneous.....	20	9	.....
Coal and coke (excluding petroleum coke).....	59	91	52
Coal.....	59	91	52
Grains.....	.....	25	90
Sorghum.....	.....	25	.....
Soybeans.....	.....	.....	41
Wheat.....	.....	.....	44
Other and unclassified.....	.....	.....	5
Lumber and products.....	23	43	5
Pulpwood.....	23	43	5
Machinery and equipment, miscellaneous.....	.....	2	.....
Manufactures of iron and steel.....	250	246	453
Angles, shapes and sections.....	10	5	27
Plates, sheets and coils.....	104	49	88
Tubes, pipes and fittings.....	.....	.....	3
Wire, bars and rods.....	86	134	264
Other and unclassified.....	50	58	71
Nitrates, phosphates and potash.....	.....	.....	149
Fertilizers, unclassified.....	.....	.....	149
Ores and metals.....	835	841	894
Ores.....	366	305	294
Alumina/bauxite.....	74	65	72
Chrome.....	40	67	.....
Copper.....	.....	.....	10
Iron.....	120	108	158
Manganese.....	132	65	39
Other and unclassified.....	.....	.....	15
Metals.....	469	536	600
Aluminum.....	425	433	380
Copper.....	.....	3	.....
Iron.....	38	100	208
Scrap.....	.....	.....	6
Zinc.....	1	.....	.....
Other and unclassified.....	5	.....	6
Other agricultural commodities.....	14	4	12
Beans, edible.....	.....	.....	3
Cocoa and cacao beans.....	2	2	2
Coffee.....	.....	.....	2
Cotton, raw.....	12	1	4
Oilseeds.....	.....	.....	1
Wool, raw.....	.....	1	.....
Petroleum products.....	540	92	194
Asphalt.....	108	33	.....
Diesel oil.....	52	.....	68
Gasoline.....	.....	26	25
Jet fuel.....	170	29	97
Liquefied gas.....	.....	4	4

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EAST COAST SOUTH AMERICA TO ASIA—			
Continued			
Petroleum products—Continued			
Other and unclassified	210	.....	.....
Miscellaneous	146	180	133
Clay, fire and china	106	110	45
Marble and stone .....	.....	.....	2
Oil, vegetable	10	.....	.....
Paper and paper products	14	10	2
Resin .....	.....	.....	3
Seeds, excluding oilseeds .....	.....	.....	3
Slag, clinkers and dross .....	.....	33	.....
Textiles .....	.....	.....	1
Container cargo	7	11	62
All other and unclassified	9	16	15
Total	1,918	1,570	2,059
WEST INDIES TO WEST COAST UNITED STATES:			
Chemicals and petroleum chemicals, miscellaneous .....	.....	6	.....
Manufactures of iron and steel	25	14	17
Plates, sheets and coils	13	5	.....
Wire, bars and rods	12	9	17
Nitrates, phosphates and potash	38	.....	.....
Ores and metals .....	.....	93	86
Ores .....	.....	53	86
Alumina/bauxite .....	.....	53	86
Metals .....	.....	30	.....
Aluminum .....	.....	30	.....
Petroleum and petroleum products	426	1,035	647
Asphalt .....	.....	17	.....
Crude oil .....	.....	46	35
Diesel oil	43	54	5
Fuel oil, residual	277	775	492
Gasoline	70	.....	33
Jet fuel	36	.....	28
Liquefied gas .....	.....	.....	17
Other and unclassified .....	.....	143	37
Miscellaneous	9	16	14
Container cargo	9	14	13
All other and unclassified .....	.....	2	1
Total	498	1,164	764
WEST INDIES TO WEST COAST CENTRAL AMERICA:			
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	3
Grains	11	.....	.....
Rice	11	.....	.....
Machinery and equipment, miscellaneous	1	.....	.....
Manufactures of iron and steel	12	10	.....
Plates, sheets and coils	7	9	.....
Other and unclassified	5	1	.....
Nitrates, phosphates and potash	95	32	32
Ammonium compounds	38	.....	.....
Fertilizers, unclassified	57	32	32
Other agricultural commodities .....	.....	49	10

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST INDIES TO WEST COAST CENTRAL AMERICA:			
Other agricultural commodities—Continued			
Sugar		49	10
Petroleum and petroleum products	114	133	199
Crude oil		44	17
Diesel oil	27	33	22
Fuel oil, residual	48		151
Gasoline	38	46	8
Jet fuel		5	1
Liquefied gas	1	5	
Miscellaneous	4	6	28
Glass and glassware		1	1
Oil, vegetable			5
Paper and paper products			2
Container cargo	2	2	17
All other and unclassified	2	3	3
Total	237	230	272
WEST INDIES TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods, miscellaneous			2
Chemicals and petroleum chemicals, miscellaneous		16	
Manufactures of iron and steel	30	26	8
Plates, sheets and coils	7	10	
Wire, bars and rods	23	16	6
All other and unclassified			2
Nitrates, phosphates and potash	82	38	63
Ammonium compounds	4		
Fertilizers, unclassified	78	38	63
Ores and metals	5		25
Ores	5		
Alumina/bauxite	5		
Metals			25
Iron			2
Scrap			23
Petroleum and petroleum products	479	339	446
Crude oil	28		105
Diesel oil	135	91	76
Fuel oil, residual	15	23	4
Gasoline	159	170	168
Jet fuel	30	13	27
Liquefied gas	47	11	
Lubricating oil	65	31	66
Miscellaneous	3	5	11
Oil, coconut		1	
Paper and paper products	1		1
Container cargo	1		5
All other and unclassified	1	4	5
Total	599	424	555
WEST INDIES TO BALBOA, R.P.:			
Chemicals and petroleum chemicals	2		
Chemicals, unclassified	2		
Ores and metals		3	
Ores, miscellaneous		3	

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST INDIES TO BALBOA, R.P.—Continued			
Petroleum and petroleum products	72	61	22
Crude oil	20	.....	.....
Diesel oil	34	.....	.....
Fuel oil, residual .....	.....	30	20
Gasoline	13	21	.....
Lubricating oil	5	10	2
Miscellaneous	1	1	.....
All other and unclassified	1	1	.....
Total	75	65	22
WEST INDIES TO HAWAII:			
Petroleum products	59	33	3
Diesel oil .....	.....	.....	3
Jet fuel	59	33	.....
Total	59	33	3
WEST INDIES TO OCEANIA:			
Nitrates, phosphates and potash	10	.....	.....
Fertilizers, unclassified	10	.....	.....
Other agricultural commodities	51	38	.....
Sugar	51	38	.....
Miscellaneous	1	4	4
Container cargo	1	4	4
Total	62	42	4
WEST INDIES TO ASIA:			
Canned and refrigerated foods	23	32	37
Refrigerated foods	23	32	37
Fish	22	23	25
Fruit, excluding bananas .....	.....	8	11
Other and unclassified	1	1	1
Chemicals and petroleum chemicals	79	91	145
Chemicals, unclassified	31	19	7
Petroleum chemicals, miscellaneous	48	72	138
Machinery and equipment, miscellaneous .....	.....	.....	1
Manufactures of iron and steel	103	121	70
Plates, sheets and coils	6	55	8
Wire, bars and rods	97	55	59
Other and unclassified .....	.....	11	3
Nitrates, phosphates and potash .....	.....	34	24
Ammonium compounds .....	.....	13	.....
Fertilizers, unclassified .....	.....	21	24
Ores and metals	47	14	.....
Metals	47	14	.....
Aluminum	28	14	.....
Iron	18	.....	.....
Zinc	1	.....	.....
Other agricultural commodities	1,314	1,244	1,223
Coffee	3	.....	.....
Sugar	1,311	1,244	1,223
Petroleum products	181	3	171
Diesel oil .....	.....	.....	34

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST INDIES TO ASIA—Continued			
Petroleum products—Continued			
Fuel oil residual	39	.....	.....
Gasoline	29	.....	65
Jet fuel	110	.....	32
Lubricating oil	3	3	6
Other and unclassified .....	.....	.....	34
Miscellaneous	107	150	143
Liquors and wines .....	.....	.....	1
Oil, vegetable .....	.....	19	.....
Container cargo	107	129	141
All other and unclassified .....	.....	2	.....
Total	1,854	1,689	1,814
EUROPE TO WEST COAST UNITED STATES:			
Canned and refrigerated foods	47	69	60
Canned foods	1	.....	1
Fruit	1	.....	1
Refrigerated foods, miscellaneous	46	69	59
Chemicals and petroleum chemicals	54	43	30
Caustic soda .....	.....	1	.....
Chemicals, unclassified	48	42	30
Petroleum chemicals, miscellaneous	6	.....	.....
Grain .....	.....	159	.....
Barley .....	.....	77	.....
Oats .....	.....	82	.....
Lumber and products, miscellaneous .....	.....	2	8
Machinery and equipment	104	121	185
Agricultural machinery and implements	3	2	1
Automobiles, trucks, accessories and parts	97	115	172
Construction machinery and equipment	3	2	3
Electrical machinery and apparatus .....	.....	2	1
Other and unclassified	1	.....	8
Manufactures of iron and steel	541	535	593
Angles, shapes and sections	13	19	23
Nails, tacks and spikes .....	.....	.....	1
Plates, sheets and coils	348	436	381
Tubes, pipes and fittings	17	24	20
Wires, bars and rods	35	27	92
Other and unclassified	128	29	76
Nitrates, phosphates and potash	271	250	399
Ammonium compounds	22	52	79
Nitrate of soda	54	7	.....
Phosphates .....	.....	.....	15
Potash	3	.....	10
Fertilizers, unclassified	192	191	295
Ores and metals	16	6	9
Ores	13	5	.....
Manganese .....	.....	5	.....
Other and unclassified	13	.....	.....
Metals	3	1	9
Aluminum	1	.....	2
Iron .....	.....	.....	7
Tin, including tinplate	1	1	.....
Zinc	1	.....	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EUROPE TO WEST COAST UNITED STATES—			
Continued			
Other agricultural commodities, miscellaneous			2
Petroleum products	88	96	387
Fuel oil, residual		39	
Gasoline	33	57	238
Jet fuel			36
Lubricating oil	6		
Other and unclassified	49		113
Miscellaneous	1,574	1,915	1,984
Bricks and tile	5	3	2
Cement	70	426	230
Glass and glassware	1		
Groceries, miscellaneous			2
Liquors and wines		1	2
Marble and stone	2	5	5
Oil, vegetable	15	20	17
Paper and paper products	8	33	64
Container cargo	1,461	1,385	1,608
All other and unclassified	12	42	54
Total	<u>2,695</u>	<u>3,196</u>	<u>3,657</u>
EUROPE TO WEST COAST CANADA:			
Canned and refrigerated foods	9	12	9
Refrigerated foods, miscellaneous	9	12	9
Lumber and products, miscellaneous			1
Machinery and equipment	6	11	14
Agricultural machinery and implements	1	1	
Automobiles, trucks, accessories and parts	4	10	11
Construction machinery and equipment	1		2
Other and unclassified			1
Manufactures of iron and steel	78	97	115
Angles, shapes and sections	2	14	5
Plates, sheets and coils	48	60	67
Tubes, pipes and fittings	2	7	6
Wire, bars and rods	9	12	25
Other and unclassified	17	4	12
Nitrates, phosphates and potash	11		17
Ammonium compounds	11		
Fertilizers, unclassified			17
Ores and metals	5	87	75
Ores	5	87	75
Copper	5		
Other and unclassified		87	75
Petroleum products		6	
Lubricating oil		6	
Miscellaneous	178	169	186
Bricks and tile	2		
Marble and stone		1	1
Paper and paper products			1
Container cargo	167	164	175
All other and unclassified	9	4	9
Total	<u>287</u>	<u>382</u>	<u>417</u>

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EUROPE TO WEST COAST CENTRAL AMERICA:			
Canned and refrigerated foods	17	6	11
Canned foods	6	5	7
Milk	6	4	3
Canned food, miscellaneous .....	.....	1	4
Refrigerated food	11	1	4
Dairy products	2	1	.....
Meat	6	.....	.....
Other and unclassified	3	.....	4
Chemicals and petroleum chemicals	50	14	25
Caustic soda .....	.....	1	2
Chemicals, unclassified	27	13	20
Petroleum chemicals, miscellaneous	23	.....	3
Grains	37	76	52
Barley	1	30	2
Oats	1	.....	.....
Rice	8	30	5
Sorghum	1	2	.....
Wheat	19	8	41
Other and unclassified	7	6	4
Lumber and products, miscellaneous .....	.....	.....	2
Machinery and equipment	6	8	20
Agricultural machinery and implements .....	.....	2	2
Automobiles, trucks, accessories and parts	1	4	12
Construction machinery and equipment	3	1	4
Electrical machinery and apparatus	1	1	1
Other and unclassified	1	.....	1
Manufactures of iron and steel	92	45	67
Angles, shapes and sections .....	.....	.....	1
Plates, sheets and coils	27	17	29
Tubes, pipes and fittings .....	.....	.....	1
Wire, bars and rods	53	26	22
Other and unclassified	12	2	14
Minerals, miscellaneous	1	2	3
Asbestos .....	.....	2	2
Soda and sodium compounds	1	.....	1
Nitrates, phosphates and potash	291	342	306
Ammonium compounds	124	198	41
Nitrate of soda	2	10	.....
Potash	21	7	.....
Fertilizers, unclassified	144	127	265
Ores and metals	31	.....	8
Ores, miscellaneous	1	.....	1
Metals	30	.....	7
Aluminum .....	.....	.....	1
Copper	3	.....	.....
Iron .....	.....	.....	2
Scrap	26	.....	.....
Tin, including tinplate	1	.....	2
Zinc .....	.....	.....	1
Other and unclassified .....	.....	.....	1
Other agricultural commodities	198	181	141
Cotton, raw .....	.....	2	.....
Oilseeds	198	91	90
Sugar .....	.....	88	51

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EUROPE TO WEST COAST CENTRAL AMERICA—			
Continued			
Petroleum products	36	.....	32
Diesel oil .....	.....	.....	13
Fuel oil, residual	35	.....	6
Jet fuel .....	.....	.....	1
Liquefied gas .....	.....	.....	3
Lubricating oil	1	.....	9
Miscellaneous	89	54	110
Cement	7	.....	.....
Flour, wheat	13	3	4
Glass and glassware .....	.....	.....	2
Groceries, miscellaneous	1	3	1
Liquors and wines .....	.....	.....	2
Marble and stone .....	.....	.....	2
Oil, vegetable	2	1	2
Paper and paper products	6	3	24
Resin .....	.....	.....	1
Rubber, manufactured .....	.....	.....	1
Seeds, excluding oilseeds	14	.....	.....
Tallow .....	.....	.....	1
Textiles .....	.....	.....	1
Wax, paraffin	1	1	3
Container cargo	22	30	39
All other and unclassified	23	13	27
Total	848	728	777
EUROPE TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods	23	11	10
Canned foods	13	4	6
Fish .....	.....	.....	1
Milk	13	4	5
Refrigerated foods	10	7	4
Dairy products	2	.....	1
Fish	4	5	.....
Other and unclassified	4	2	3
Chemicals and petroleum chemicals	40	73	63
Caustic soda	20	3	5
Chemicals, unclassified	19	69	32
Petroleum chemicals, miscellaneous	1	1	26
Grains	73	40	43
Barley	5	2	8
Oats	13	.....	.....
Rice .....	.....	4	2
Sorghum	5	.....	5
Wheat	23	29	17
Other and unclassified	27	5	11
Lumber and products, miscellaneous	1	.....	.....
Machinery and equipment	63	45	69
Agricultural machinery and implements	7	5	10
Automobiles, trucks, accessories and parts	36	17	21
Construction machinery and equipment	14	11	26
Electrical machinery and apparatus	2	8	6
Other and unclassified	4	4	6
Manufactures of iron and steel	152	129	118

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EUROPE TO WEST COAST SOUTH AMERICA—			
Continued			
Manufactures of iron and steel—Continued			
Angles, shapes and sections	20	5	7
Nails, tacks and spikes	3	6	.....
Plates, sheets and coils	94	69	78
Tubes, pipes and fittings	19	10	8
Wire, bars and rods	8	36	11
Other and unclassified	8	3	14
Minerals, miscellaneous	8	22	23
Asbestos .....	.....	6	.....
Borax .....	.....	1	1
Infusorial earth .....	.....	2	.....
Soda and sodium compounds	8	13	21
Sulfur .....	.....	.....	1
Nitrates, phosphates and potash	346	362	452
Ammonium compounds	49	22	44
Nitrate of soda	1	2	2
Phosphates	6	6	8
Potash	88	87	27
Fertilizers, unclassified	202	245	371
Ores and metals	43	15	19
Ores	10	7	6
Chrome	8	6	6
Manganese .....	.....	1	.....
Tin	2	.....	.....
Metals	33	8	13
Iron	21	3	6
Scrap	5	.....	.....
Tin, including tinplate	7	5	6
Zinc .....	.....	.....	1
Other agricultural commodities	2	29	60
Molasses	2	2	2
Sugar .....	.....	27	58
Petroleum products	42	179	425
Diesel oil	1	64	146
Fuel oil, residual	1	36	118
Gasoline .....	.....	.....	87
Jet fuel	5	41	22
Liquefied gas .....	.....	.....	18
Lubricating oil	35	36	25
Other and unclassified .....	.....	2	9
Miscellaneous	971	810	811
Bricks and tile	2	1	4
Carbon black	1	.....	.....
Cement .....	.....	1	1
Clay, fire and china .....	.....	.....	1
Fibers, plant .....	.....	1	1
Flour, wheat	62	45	46
Glass and glassware	2	.....	2
Groceries, miscellaneous	3	4	2
Oil, vegetable .....	.....	.....	4
Paper and paper products	33	46	62
Resin	1	1	1
Rubber, manufactured .....	.....	1	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EUROPE TO WEST COAST SOUTH AMERICA—			
Continued			
Miscellaneous—Continued			
Textiles.....	1	3	1
Wax, paraffin	3	2	3
Container cargo	796	631	568
All other and unclassified	67	74	115
Total.....	<u>1,764</u>	<u>1,715</u>	<u>2,093</u>
EUROPE TO BALBOA, R.P.:			
Chemicals and petroleum chemicals	8	6	5
Chemicals, unclassified	4	4	3
Petroleum chemicals, miscellaneous	4	2	2
Manufactures of iron and steel	2	4	1
Angles, shapes and sections .....	.....	.....	1
Plates, sheets and coils	1	.....	.....
Wire, bars and rods	1	4	.....
Petroleum products	27	3	5
Fuel oil, residual	23	.....	.....
Lubricating oil	4	3	5
Miscellaneous	10	6	7
Oil vegetable .....	.....	.....	6
Container cargo	10	5	.....
All other and unclassified .....	.....	1	1
Total.....	<u>47</u>	<u>19</u>	<u>18</u>
EUROPE TO OCEANIA:			
Canned and refrigerated foods	17	11	13
Refrigerated food	17	11	13
Meat	1	.....	1
Other and unclassified	16	11	12
Chemicals and petroleum chemicals	36	127	96
Caustic soda	9	34	42
Chemicals, unclassified	26	88	50
Petroleum chemicals, miscellaneous	1	5	4
Grains	5	2	2
Sorghum	1	.....	.....
Soybeans	3	.....	.....
Wheat	1	2	2
Lumber and products	2	1	4
Boards and planks .....	.....	1	.....
Pulpwood	1	.....	4
Other and unclassified	1	.....	.....
Machinery and equipment	17	27	29
Agricultural machinery and implements	2	3	3
Automobiles, trucks, accessories and parts	9	12	21
Construction machinery and equipment	5	7	3
Electrical machinery and apparatus	1	4	2
Other and unclassified .....	.....	1	.....
Manufactures of iron and steel	35	57	55
Angles, shapes and sections	3	5	9
Nails, tacks and spikes	1	.....	.....
Plates, sheets and coils	11	16	14
Tubes, pipes and fittings	6	13	9

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
EUROPE TO OCEANIA—Continued			
Manufactures of iron and steel—Continued			
Wire, bars and rods	10	13	20
Other and unclassified	4	10	3
Minerals, miscellaneous	5	7	7
Salt	4	3	4
Soda and sodium compounds	1	4	3
Nitrates, phosphates and potash	65	46	36
Ammonium compounds	19	10	16
Nitrate of soda .....	.....	.....	5
Phosphates .....	.....	.....	5
Potash	4	8	7
Fertilizers, unclassified	42	28	3
Ores and metals	15	22	28
Ores	15	20	8
Lead .....	.....	.....	8
Other and unclassified	15	20	.....
Metals .....	.....	2	20
Iron .....	.....	.....	7
Lead .....	.....	.....	11
Other and unclassified .....	.....	2	2
Other agricultural commodities	4	2	2
Oilseeds	3	1	1
Sugar	1	1	1
Petroleum products	14	1	40
Liquefied gas	10	1	9
Lubricating oil	3	.....	5
Petroleum coke .....	.....	.....	24
Other and unclassified	1	.....	2
Miscellaneous	690	677	702
Bricks and tile	1	3	1
Cement	4	.....	5
Flour, wheat	18	15	15
Glass and glassware	1	.....	1
Liquors and wines .....	.....	.....	1
Oil, vegetable	7	11	12
Paper and paper products	15	9	11
Resin	1	.....	.....
Slag, clinkers and dross .....	.....	2	.....
Textiles .....	.....	.....	1
Container cargo	618	583	601
All other and unclassified	25	54	54
Total	905	980	1,014
EUROPE TO ASIA:			
Canned and refrigerated foods	82	108	59
Refrigerated foods	82	108	59
Fish	71	92	56
Fruit, excluding bananas .....	.....	1	.....
Other and unclassified	11	15	3
Chemicals and petroleum chemicals	65	205	152
Caustic soda .....	.....	6	5
Chemicals, unclassified	63	159	128
Petroleum chemicals, miscellaneous	2	40	19

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
EUROPE TO ASIA—Continued			
Grain	94	10	.....
Barley	27	.....	.....
Wheat	22	10	.....
Other and unclassified	45	.....	.....
Lumber and products	19	11	5
Pulpwood	19	7	5
Other and unclassified .....	.....	4	.....
Machinery and equipment	4	17	14
Automobiles, trucks, accessories and parts	3	16	12
Construction machinery and equipment .....	.....	1	1
Electrical machinery and apparatus	1	.....	.....
Other and unclassified .....	.....	.....	1
Manufactures of iron and steel	17	25	.....
Plates, sheets and coils	17	24	.....
Tubes, pipes and fittings .....	.....	1	.....
Nitrates, phosphates and potash	93	71	30
Nitrate of soda .....	.....	1	.....
Potash	88	46	30
Fertilizers, unclassified	5	24	.....
Ores and metals	41	28	47
Ores	41	.....	.....
Chrome	14	.....	.....
Other and unclassified	27	.....	.....
Metals .....	.....	28	47
Iron .....	.....	.....	31
Scrap .....	.....	.....	16
Other and unclassified .....	.....	28	.....
Petroleum products	6	16	3
Jet fuel .....	.....	1	.....
Liquefied gas .....	.....	6	.....
Lubricating oil	6	9	3
Miscellaneous	164	163	123
Bricks and tile .....	.....	4	.....
Groceries, miscellaneous .....	.....	.....	1
Marble and stone .....	.....	2	.....
Oil, vegetable .....	.....	1	2
Paper and paper products .....	.....	23	17
Container cargo	148	114	89
All other and unclassified	16	19	14
Total	585	654	433
AFRICA TO WEST COAST UNITED STATES:			
Machinery and equipment, miscellaneous .....	.....	.....	1
Manufactures of iron and steel	19	.....	11
Plates, sheets and coils	10	.....	.....
Wires, bars and rods .....	.....	.....	11
Other and unclassified	9	.....	.....
Ores and metals	26	12	21
Ores, miscellaneous	25	12	21
Metals	1	.....	.....
Iron	1	.....	.....
Other agricultural commodities .....	.....	18	.....
Sugar .....	.....	18	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
AFRICA TO WEST COAST UNITED STATES—			
Continued			
Petroleum products .....	.....	.....	54
Fuel oil, residual .....	.....	.....	54
Miscellaneous .....	.....	.....	58
Cement .....	.....	.....	34
Marble and stone .....	.....	.....	1
Slag, clinkers and dross .....	.....	.....	15
Container cargo .....	.....	.....	7
All other and unclassified .....	.....	.....	1
Total	45	30	145
AFRICA TO WEST COAST CANADA:			
Nitrates, phosphates and potash	851	726	712
Phosphates	851	726	712
Miscellaneous .....	.....	.....	1
Container cargo .....	.....	.....	1
Total	851	726	713
AFRICA TO WEST COAST CENTRAL AMERICA:			
Chemicals and petroleum chemicals	56	.....	.....
Chemicals, unclassified	56	.....	.....
Grains, miscellaneous .....	.....	1	14
Nitrates, phosphates and potash	163	487	149
Phosphates	134	473	149
Fertilizers, unclassified	29	14	.....
Ores and metals	4	.....	.....
Ores	3	.....	.....
Manganese	3	.....	.....
Metals, miscellaneous	1	.....	.....
Miscellaneous .....	.....	.....	1
Container cargo .....	.....	.....	1
Total	223	487	164
AFRICA TO WEST COAST SOUTH AMERICA:			
Canned and refrigerated foods	6	.....	.....
Refrigerated foods	6	.....	.....
Fish	6	.....	.....
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	12
Grains .....	.....	.....	14
Corn .....	.....	.....	14
Lumber and products, miscellaneous	1	.....	.....
Manufactures of iron and steel	27	18	.....
Plates, sheets and coils	27	1	.....
Wire, bars and rods .....	.....	17	.....
Nitrates, phosphates and potash	14	56	16
Phosphates .....	.....	4	.....
Fertilizers, unclassified	14	52	16
Petroleum products	12	.....	.....
Liquefied gas	12	.....	.....
Miscellaneous	4	2	3
Paper and paper products .....	.....	2	2
Container cargo	3	.....	.....

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
AFRICA TO WEST COAST SOUTH AMERICA—			
Continued			
Miscellaneous—Continued			
All other and unclassified	1	.....	1
Total	64	76	45
AFRICA TO OCEANIA:			
Nitrates, phosphates and potash	157	145	168
Phosphates	153	118	168
Fertilizers, unclassified	4	27	.....
Miscellaneous	1	18	.....
Container cargo .....	.....	17	.....
All other and unclassified	1	1	.....
Total	158	163	168
AFRICA TO ASIA:			
Canned and refrigerated foods	27	62	31
Fish, refrigerated	27	62	31
Nitrates, phosphates and potash	32	25	.....
Phosphates	32	25	.....
Ores and metals, miscellaneous .....	.....	.....	40
Petroleum products .....	.....	55	.....
Gasoline .....	.....	55	.....
Miscellaneous .....	.....	1	4
Container cargo .....	.....	.....	4
All other and unclassified .....	.....	1	.....
Total	59	143	75
ASIA (MIDDLE EAST) TO WEST COAST			
UNITED STATES:			
Canned and refrigerated foods, miscellaneous	3	1	1
Petroleum products	32	.....	59
Gasoline	32	.....	34
Other and unclassified .....	.....	.....	25
Miscellaneous	46	29	38
Container cargo	45	29	38
All other and unclassified	1	.....	.....
Total	81	29	98
ASIA (MIDDLE EAST) TO WEST COAST			
SOUTH AMERICA:			
Grains .....	.....	11	.....
Rice .....	.....	11	.....
Nitrates, phosphates and potash	85	33	35
Phosphates .....	.....	.....	35
Potash	85	33	.....
Petroleum products	19	.....	.....
Liquefied gas	19	.....	.....
Miscellaneous	6	33	2
Container cargo	5	.....	1
All other and unclassified	1	33	1
Total	110	77	37

**Table 10.—Important Commodity Shipments over Principal Trade Routes
Atlantic to Pacific—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	<i>1992</i>	<i>1991</i>	<i>1990</i>
ASIA (MIDDLE EAST) TO ASIA			
Chemicals and petroleum chemicals	9	.....	.....
Chemicals, unclassified	9	.....	.....
Other agricultural commodities	4	.....	.....
Molasses	4	.....	.....
Petroleum products	2	.....	.....
Lubricating oil	1	.....	.....
Other and unclassified	1	.....	.....
Miscellaneous	10	16	1
Oil Vegetable	1	.....	.....
Tallow	1	.....	.....
Container cargo	8	16	1
Total	24	16	1

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST UNITED STATES TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	6	1	3
Refrigerated foods	6	1	3
Fish	2	1	.....
Fruit, excluding bananas	2	.....	.....
Other and unclassified	2	.....	3
Chemicals and petroleum chemicals	58	28	48
Caustic soda	25	.....	.....
Chemicals, unclassified	33	28	48
Coal and coke (excluding petroleum coke)	18	.....	.....
Coal	18	.....	.....
Lumber and products	3	15	23
Boards and planks	3	.....	23
Pulpwood .....	.....	15	.....
Ores and metals	34	10	.....
Metals	34	10	.....
Lead .....	.....	10	.....
Other and unclassified	34	.....	.....
Other agricultural commodities	1	9	.....
Coffee	1	.....	.....
Molasses .....	.....	9	.....
Petroleum and petroleum products	952	745	633
Crude oil	272	146	123
Diesel oil	45	66	33
Fuel oil, residual	132	31	146
Gasoline	280	393	120
Jet fuel .....	.....	.....	70
Liquefied gas .....	.....	.....	8
Lubricating oil	154	109	122
Other and unclassified	69	.....	11
Miscellaneous	94	110	107
Liquors and wines .....	.....	.....	4
Oil, vegetable	29	40	21
Container cargo	62	68	73
All other and unclassified	3	2	9
Total	1,166	918	814
WEST COAST UNITED STATES TO EAST COAST CANADA:			
Canned and refrigerated foods	10	.....	.....
Refrigerated foods	10	.....	.....
Fish	10	.....	.....
Coal and coke (excluding petroleum coke) .....	.....	24	24
Coke .....	.....	24	24
Ores and metals .....	.....	16	.....
Ores .....	.....	16	.....
Lead .....	.....	16	.....
Petroleum products	273	138	254
Diesel oil	38	.....	.....
Fuel oil, residual	33	.....	108
Petroleum coke	202	138	146
Miscellaneous	4	3	3

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST UNITED STATES TO EAST COAST			
CANADA—Continued			
Miscellaneous—Continued			
Container cargo	4	3	3
Total	<u>287</u>	<u>181</u>	<u>280</u>
WEST COAST UNITED STATES TO EAST COAST			
CENTRAL AMERICA:			
Grains .....	.....	9	.....
Rice .....	.....	9	.....
Petroleum products	38	240	.....
Diesel oil	8	.....	.....
Fuel oil, residual	5	.....	.....
Gasoline	25	239	.....
Liquefied gas .....	.....	1	.....
Miscellaneous .....	.....	1	1
Container cargo .....	.....	1	1
Total	<u>38</u>	<u>250</u>	<u>1</u>
WEST COAST UNITED STATES TO EAST COAST			
SOUTH AMERICA:			
Canned and refrigerated foods	9	6	.....
Refrigerated foods	9	6	.....
Fruit, excluding bananas	7	5	.....
Other and unclassified	2	1	.....
Chemicals and petroleum chemicals .....	.....	12	.....
Caustic soda .....	.....	10	.....
Chemicals, unclassified .....	.....	2	.....
Lumber and products	17	10	5
Pulpwood	13	10	5
Other and unclassified	4	.....	.....
Machinery and equipment	1	.....	4
Automobiles, trucks, accessories and parts	1	.....	4
Minerals, miscellaneous	150	148	143
Borax .....	.....	1	1
Salt	4	.....	.....
Soda and sodium compounds	119	90	77
Sulfur	27	57	65
Other agricultural commodities	7	.....	.....
Peas, dry	7	.....	.....
Ores and metals	30	88	31
Ores	30	67	31
Copper	30	55	31
Other and unclassified .....	.....	12	.....
Metals .....	.....	21	.....
Copper .....	.....	21	.....
Petroleum products	68	75	136
Fuel oil, residual .....	.....	.....	127
Gasoline .....	.....	70	.....
Liquefied gas	38	.....	.....
Petroleum coke	30	5	9
Miscellaneous	48	39	23
Paper and paper products	1	8	10

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST UNITED STATES TO EAST COAST SOUTH AMERICA—Continued			
Miscellaneous—Continued			
Container cargo	45	30	12
All other and unclassified	2	1	1
Total	<u>330</u>	<u>378</u>	<u>344</u>
WEST COAST UNITED STATES TO CRISTOBAL, R.P.:			
Petroleum products	5	.....	.....
Fuel oil, residual	5	.....	.....
Miscellaneous	54	67	15
Container cargo	53	67	15
All other and unclassified	1	.....	.....
Total	<u>59</u>	<u>67</u>	<u>15</u>
WEST COAST UNITED STATES TO WEST INDIES:			
Canned and refrigerated foods	5	4	.....
Refrigerated foods	5	4	.....
Fish	5	4	.....
Grains .....	.....	15	.....
Rice .....	.....	15	.....
Petroleum products	578	79	373
Diesel oil	63	.....	7
Fuel oil, residual	358	17	362
Gasoline	38	62	.....
Kerosene	70	.....	.....
Lubricating oil	49	.....	.....
Other and unclassified .....	.....	.....	4
Miscellaneous	55	42	8
Container cargo	53	42	7
All other and unclassified	2	.....	1
Total	<u>638</u>	<u>140</u>	<u>381</u>
WEST COAST UNITED STATES TO EUROPE:			
Canned and refrigerated foods	179	210	207
Canned foods	5	.....	.....
Fruit	5	.....	.....
Refrigerated foods	174	210	207
Fish	51	110	107
Fruit, excluding bananas	36	36	22
Other and unclassified	87	64	78
Chemicals and petroleum chemicals	100	81	62
Caustic soda	48	18	.....
Chemicals, unclassified	35	28	35
Petroleum chemicals, miscellaneous	17	35	27
Coal and coke (excluding petroleum coke)	263	175	214
Coal	208	54	103
Coke	55	121	111
Grains	298	147	241
Rice	167	114	160
Wheat	131	30	81
Other and unclassified .....	.....	3	.....
Lumber and products	<u>506</u>	<u>501</u>	<u>629</u>

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST UNITED STATES TO EUROPE—			
Continued			
Lumber and products—Continued			
Boards and planks	154	119	198
Plywood, veneers, composition board	54	43	67
Pulpwood	258	280	341
Other and unclassified	40	59	23
Machinery and equipment	2	6	.....
Automobiles, trucks, accessories and parts .....	.....	3	.....
Construction machinery and equipment	2	.....	.....
Other and unclassified .....	.....	3	.....
Manufactures of iron and steel .....	.....	9	.....
Plates, sheets and coils .....	.....	8	.....
Tubes, pipes and fittings .....	.....	1	.....
Minerals, miscellaneous	879	723	468
Borax	366	391	410
Soda and sodium compounds	462	157	58
Sulfur	51	175	.....
Nitrates, phosphates and potash	11	30	21
Fishmeal .....	.....	3	21
Nitrate of soda	11	23	.....
Phosphates .....	.....	4	.....
Ores and metals	702	561	391
Ores	592	456	304
Copper	102	10	31
Iron .....	.....	.....	23
Lead	86	126	74
Tin	1	.....	.....
Zinc	335	246	139
Other and unclassified	68	74	37
Metals	110	105	87
Copper .....	.....	16	.....
Lead	26	32	22
Zinc	84	50	65
Other and unclassified .....	.....	7	.....
Other agricultural commodities	10	6	7
Beans, edible .....	.....	1	1
Cotton, raw	2	3	6
Oilseeds	2	2	.....
Peas, dry	6	.....	.....
Petroleum products	2,594	2,029	2,045
Diesel oil	111	.....	.....
Fuel oil, residual	309	138	.....
Gasoline	13	.....	.....
Liquefied gas	25	16	12
Lubricating oil .....	.....	1	6
Petroleum coke	2,120	1,874	2,027
Other and unclassified	16	.....	.....
Miscellaneous	1,389	1,440	1,343
Clay, fire and china	15	15	15
Flour, wheat .....	.....	.....	2
Groceries, miscellaneous	1	.....	9
Oil, coconut	1	.....	.....
Oil, fish	2	.....	.....
Oil, vegetable	5	9	12

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST UNITED STATES TO EUROPE—			
Continued			
Miscellaneous—Continued			
Paper and paper products	34	13	8
Seeds, excluding oilseeds	1	.....	.....
Tallow	6	.....	.....
Wax, paraffin .....	.....	5	4
Container cargo	1,291	1,330	1,246
All other and unclassified	33	68	47
Total	<u>6,933</u>	<u>5,918</u>	<u>5,628</u>
WEST COAST UNITED STATES TO AFRICA:			
Canned and refrigerated foods	7	.....	.....
Canned foods	7	.....	.....
Milk	7	.....	.....
Grains	1,326	1,760	957
Barley .....	.....	.....	26
Rice .....	.....	30	27
Wheat	1,326	1,730	904
Lumber and products	27	39	97
Boards and planks	18	27	93
Pulpwood	9	12	4
Minerals, miscellaneous	227	108	182
Borax	1	.....	.....
Soda and sodium compounds .....	.....	41	85
Sulfur	226	67	97
Nitrates, phosphates and potash .....	.....	.....	27
Ores and metals .....	.....	.....	49
Ores, miscellaneous .....	.....	.....	49
Other agricultural commodities	56	37	33
Cotton, raw	56	37	33
Petroleum products	45	.....	.....
Kerosene	45	.....	.....
Miscellaneous	63	14	36
Flour, wheat	52	.....	.....
Container cargo	11	13	36
All other and unclassified .....	.....	1	.....
Total	<u>1,749</u>	<u>1,958</u>	<u>1,381</u>
WEST COAST UNITED STATES TO ASIA (MIDDLE-EAST):			
Canned and refrigerated foods	3	1	1
Refrigerated foods, miscellaneous	3	1	1
Chemicals and petroleum chemicals .....	.....	.....	4
Chemicals, miscellaneous .....	.....	.....	2
Petroleum chemicals, miscellaneous .....	.....	.....	2
Grains	50	.....	.....
Barley	50	.....	.....
Minerals, miscellaneous	39	.....	.....
Sulfur	39	.....	.....
Petroleum products	54	.....	2
Lubricating oil .....	.....	.....	2
Petroleum coke	54	.....	.....

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST UNITED STATES TO ASIA (MIDDLE-EAST)—Continued			
Miscellaneous	56	29	36
Container cargo	56	29	35
All other and unclassified .....	.....	.....	1
Total	202	30	43
WEST COAST CANADA TO EAST COAST UNITED STATES			
Chemicals and petroleum chemicals	263	242	194
Caustic soda	10	.....	.....
Chemicals, unclassified	200	242	187
Petroleum chemicals, miscellaneous	53	.....	7
Lumber and products	484	458	788
Boards and planks	469	453	785
Pulpwood	1	5	2
Other and unclassified	14	.....	1
Petroleum and petroleum products	487	505	101
Crude oil	367	401	80
Diesel oil	17	.....	21
Gasoline	101	104	.....
Jet fuel	2	.....	.....
Miscellaneous	5	5	1
Paper and paper products	3	4	1
Container cargo .....	.....	1	.....
All other and unclassified	2	.....	.....
Total	1,239	1,209	1,084
WEST COAST CANADA TO EAST COAST CENTRAL AMERICA:			
Grain	106	.....	.....
Wheat	106	.....	.....
Nitrates, phosphates and potash	16	14	.....
Fertilizers, miscellaneous	16	14	.....
Petroleum products	32	28	.....
Gasoline	32	28	.....
Total	154	42	.....
WEST COAST CANADA TO EAST COAST SOUTH AMERICA			
Chemicals and petroleum chemicals, miscellaneous .....	.....	16	.....
Coal and coke (excluding petroleum coke) .....	.....	56	.....
Coal .....	.....	56	.....
Grains	587	194	65
Barley	56	79	16
Oats	1	1	.....
Wheat	514	106	49
Other and unclassified	16	8	.....
Lumber and products	52	40	17
Boards and planks	2	.....	.....
Plywood, veneers and composition board	1	.....	.....
Pulpwood	49	40	17
Minerals, miscellaneous	211	292	261
Asbestos	1	.....	.....

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST CANADA TO EAST COAST SOUTH AMERICA—Continued			
Minerals, miscellaneous—Continued			
Sulfur	210	292	261
Nitrates, phosphates and potash .....	.....	.....	35
Ammonium compounds .....	.....	.....	4
Potash .....	.....	.....	31
Ores and metals	5	35	35
Ores	5	15	26
Copper	5	15	25
Other and unclassified .....	.....	.....	1
Metals .....	.....	20	9
Copper .....	.....	20	9
Other agricultural commodities	24	21	16
Beans, edible	9	11	5
Peas, dry	15	10	11
Miscellaneous	72	78	52
Groceries, miscellaneous	13	.....	.....
Paper and paper products	30	65	40
Seeds, excluding oilseeds	1	.....	.....
Container cargo	26	13	9
All other and unclassified	2	.....	3
Total	951	732	481
WEST COAST CANADA TO WEST INDIES:			
Grains	38	.....	.....
Wheat	38	.....	.....
Lumber and products	62	38	44
Boards and planks	58	38	42
Plywood, veneers, composition board .....	.....	.....	2
Other and unclassified	4	.....	.....
Minerals, miscellaneous	27	21	39
Sulfur	27	21	39
Nitrates, phosphates and potash	21	20	24
Ammonium compounds	12	4	15
Fertilizers, unclassified	9	16	9
Miscellaneous	5	2	2
Paper and paper products	5	2	2
Total	153	81	109
WEST COAST CANADA TO EUROPE:			
Canned and refrigerated foods	83	33	24
Refrigerated foods	83	33	24
Fish	17	18	6
Other and unclassified	66	15	18
Chemicals and petroleum chemicals .....	.....	23	4
Chemicals, unclassified .....	.....	13	4
Petroleum chemicals, miscellaneous .....	.....	10	.....
Coal and coke (excluding petroleum coke)	2,605	2,365	1,944
Coal	2,578	2,253	1,944
Coke	27	112	.....
Grains	103	530	288
Barley	6	448	186
Wheat	27	52	73

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST CANADA TO EUROPE—Continued			
Grains—Continued			
Other and unclassified	70	30	29
Lumber and products	2,696	3,042	3,401
Boards and planks	904	1,388	1,684
Plywood, veneers, composition board	100	79	117
Pulpwood	1,498	1,475	1,440
Other and unclassified	194	100	160
Machinery and equipment, miscellaneous		3	2
Manufactures of iron and steel, miscellaneous		1	.....
Minerals, miscellaneous	179	377	985
Asbestos	1	.....	3
Borax .....	.....	4	10
Soda and sodium compounds	7	.....	.....
Sulfur	171	373	972
Nitrates, phosphates and potash .....	.....	34	37
Fishmeal .....	.....	2	1
Potash .....	.....	15	13
Fertilizer, unclassified .....	.....	17	23
Ores and metals	107	132	91
Ores	88	89	70
Copper	82	57	70
Lead .....	.....	11	.....
Zinc	4	21	.....
Other and unclassified	2	.....	.....
Metals	19	43	21
Aluminum	2	4	2
Copper	10	10	.....
Iron	1	.....	.....
Lead	3	14	15
Zinc	3	15	4
Other agricultural commodities	53	30	8
Beans, edible	3	.....	4
Oilseeds	39	26	4
Peas, dry	11	4	.....
Petroleum products	90	224	159
Petroleum coke	90	224	159
Miscellaneous	676	672	594
Groceries, miscellaneous .....	.....	1	.....
Liquors and wines	4	.....	.....
Oil, vegetable	2	.....	2
Paper and paper products	377	335	311
Seeds, excluding oilseeds	16	.....	3
Tallow	21	26	28
Container cargo	231	278	235
All other and unclassified	25	32	15
Total	6,592	7,466	7,537
WEST COAST CANADA TO AFRICA:			
Coal and coke (excluding petroleum coke)	91	122	.....
Coal	91	122	.....
Grains	57	264	156
Barley .....	.....	49	.....
Wheat	47	213	156

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST CANADA TO AFRICA—Continued			
Grains—Continued			
Other and unclassified	10	2	.....
Lumber and products	16	303	267
Boards and planks	11	250	267
Plywood, veneers, composition board .....	.....	18	.....
Pulpwood	5	19	.....
Other and unclassified .....	.....	16	.....
Minerals, miscellaneous	1,667	1,680	1,016
Asbestos	1	.....	.....
Sulfur	1,666	1,680	1,016
Other agricultural commodities, miscellaneous .....	.....	.....	2
Miscellaneous	33	.....	.....
All other and unclassified	33	.....	.....
Total	1,864	2,369	1,442
WEST COAST CANADA TO ASIA (MIDDLE EAST):			
Lumber and products .....	.....	6	6
Boards and planks .....	.....	.....	2
Pulpwood .....	.....	4	4
Other and unclassified .....	.....	2	.....
Minerals, miscellaneous	149	261	259
Sulfur	149	261	259
Miscellaneous .....	.....	1	1
Paper and paper products .....	.....	.....	1
All other and unclassified .....	.....	1	.....
Total	149	268	265
WEST COAST CENTRAL AMERICA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	28	14	2
Refrigerated foods	28	14	2
Bananas	28	14	1
Other and unclassified .....	.....	.....	1
Chemicals and petroleum chemicals	288	181	150
Chemicals, unclassified	268	174	150
Petroleum chemicals, miscellaneous	20	7	.....
Machinery and equipment	1	.....	5
Automobiles, trucks, accessories and parts .....	.....	.....	5
Construction machinery and equipment	1	.....	.....
Manufactures of iron and steel	61	63	97
Angles, shapes and sections	7	.....	.....
Plates, sheets and coils	17	63	61
Other and unclassified	37	.....	36
Minerals, miscellaneous	536	556	537
Salt	505	556	537
Sulfur	31	.....	.....
Nitrates, phosphates and potash	2	8	10
Fishmeal	2	8	10
Ores and metals	183	177	143
Ores	168	177	143
Iron .....	.....	.....	106
Other and unclassified	168	177	37

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST CENTRAL AMERICA TO EAST COAST			
UNITED STATES—Continued			
Ores and metals—Continued			
Metals	15	.....	.....
Iron	15	.....	.....
Other agricultural commodities	1,021	824	626
Coffee	26	8	27
Molasses	329	251	172
Skins and hides .....	.....	.....	7
Sugar	666	565	420
Petroleum and petroleum products	197	11	3
Asphalt	6	.....	.....
Crude oil	52	.....	.....
Fuel oil, residual	96	.....	.....
Gasoline	4	.....	3
Liquefied gas .....	.....	10	.....
Other and unclassified	39	1	.....
Miscellaneous	7	5	3
Oil fish .....	.....	.....	3
Container cargo	7	4	.....
All other and unclassified .....	.....	1	.....
Total	2,323	1,839	1,575
WEST COAST CENTRAL AMERICA TO EAST COAST			
CENTRAL AMERICA:			
Canned and refrigerated foods	4	.....	.....
Milk, canned	4	.....	.....
Chemicals and petroleum chemicals	56	.....	23
Chemicals, unclassified	56	.....	23
Grains	15	59	67
Corn	15	30	.....
Sorghum .....	.....	.....	9
Wheat .....	.....	29	58
Lumber and products	1	.....	.....
Boards and planks	1	.....	.....
Machinery and equipment, miscellaneous .....	.....	.....	1
Manufactures of iron and steel .....	.....	6	.....
Plates, sheets and coils .....	.....	6	.....
Minerals, miscellaneous .....	.....	.....	27
Salt .....	.....	.....	27
Nitrates, phosphates and potash	203	342	268
Ammonium compounds .....	.....	8	.....
Phosphates	203	334	268
Ores and metals	4	.....	24
Ores, miscellaneous	4	.....	.....
Metals .....	.....	.....	24
Copper .....	.....	.....	24
Other agricultural commodities	36	41	15
Oilseeds	1	1	1
Sugar	35	40	14
Petroleum and petroleum products	92	39	93
Crude oil	26	.....	.....
Diesel oil	38	20	2

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST CENTRAL AMERICA TO EAST COAST CENTRAL AMERICA—Continued			
Petroleum and petroleum products—Continued			
Fuel oil, residual .....	.....	.....	53
Gasoline	28	19	19
Other and unclassified .....	.....	.....	19
Miscellaneous	8	5	17
Oil, fish .....	.....	1	.....
Oil, vegetable	7	4	17
All other and unclassified	1	.....	.....
Total	419	492	533
WEST COAST CENTRAL AMERICA TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	71	67	56
Refrigerated foods	71	67	56
Bananas	4	.....	.....
Fish	67	67	56
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	7
Grains	1	.....	.....
Oats	1	.....	.....
Lumber and products	2	.....	3
Boards and planks	2	.....	3
Minerals, miscellaneous	1	.....	.....
Sulfur	1	.....	.....
Nitrates, phosphates and potash	7	13	5
Ammonium compounds	7	12	5
Fishmeal .....	.....	1	.....
Ores and Metals	97	43	30
Ores	95	43	30
Copper	10	.....	12
Other and unclassified	85	43	18
Metals	2	.....	.....
Scrap	2	.....	.....
Other agricultural commodities	112	18	37
Beans, edible	7	.....	.....
Peas, dry	4	.....	.....
Sugar	101	18	37
Miscellaneous	4	4	3
Oil, vegetable	2	.....	.....
Container cargo	2	3	1
All other and unclassified .....	.....	1	2
Total	295	145	141
WEST COAST CENTRAL AMERICA TO CRISTOBAL, R.P.:			
Lumber and products, miscellaneous	2	.....	.....
Ores and metals	31	10	.....
Ores, miscellaneous	31	10	.....
Petroleum products	15	.....	13
Diesel oil	10	.....	.....
Fuel oil, residual	5	.....	13
Miscellaneous	2	1	8

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST CENTRAL AMERICA TO CRISTOBAL, R.P.—Continued			
Miscellaneous—Continued			
Container cargo	2	1	8
Total	50	11	21
WEST COAST CENTRAL AMERICA TO WEST INDIES:			
Canned and refrigerated foods	29	52	94
Refrigerated foods	29	52	94
Bananas .....	.....	7	.....
Fish	29	45	93
Other and unclassified .....	.....	.....	1
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	13
Grains	4	.....	16
Rice	4	.....	.....
Wheat .....	.....	.....	16
Lumber and products	9	15	15
Boards and planks	8	15	15
Other and unclassified	1	.....	.....
Machinery and equipment, miscellaneous .....	.....	.....	1
Nitrates, phosphates and potash	2	3	6
Fishmeal	2	3	2
Nitrate of soda .....	.....	.....	4
Ores and metals	179	45	.....
Ores	179	45	.....
Iron	152	20	.....
Other and unclassified	27	25	.....
Other agricultural commodities	112	134	59
Cotton, raw	1	.....	.....
Molasses	63	82	31
Sugar, raw	48	52	28
Petroleum products	429	6	24
Diesel oil	166	.....	.....
Fuel oil, residual	219	6	24
Jet fuel	44	.....	.....
Miscellaneous	12	5	19
Oil, fish	3	.....	.....
Oil, vegetable	1	3	.....
Tallow	4	.....	.....
Container cargo	2	2	17
All other and unclassified	2	.....	2
Total	776	260	247
WEST COAST CENTRAL AMERICA TO EUROPE:			
Canned and refrigerated foods	517	573	524
Canned foods .....	.....	2	1
Fish .....	.....	2	.....
Other and unclassified .....	.....	.....	1
Refrigerated foods	517	571	523
Bananas	485	530	450
Dairy products	2	.....	.....
Fish	25	39	66
Fruit, excluding bananas	3	1	4

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST CENTRAL AMERICA TO EUROPE—			
Continued			
Canned and refrigerated foods—Continued			
Refrigerated foods—Continued			
Other and unclassified	2	1	3
Chemicals and petroleum chemicals	1	.....	2
Chemicals, unclassified	1	.....	2
Coal and coke (excluding petroleum coke) .....	.....	29	.....
Coke .....	.....	29	.....
Grains, miscellaneous .....	.....	1	.....
Lumber and products	3	6	18
Boards and planks	3	3	4
Pulpwood .....	.....	3	14
Manufactures of iron and steel	174	28	107
Plates, sheets and coils	136	28	107
Wire, bars and rods	4	.....	.....
Other and unclassified	34	.....	.....
Ores and metals	33	35	23
Ores .....	.....	13	10
Copper .....	.....	7	3
Lead .....	.....	.....	2
Zinc .....	.....	6	5
Metals	33	22	13
Copper	33	20	12
Iron .....	.....	.....	1
Other and unclassified .....	.....	2	.....
Other agricultural commodities	114	125	264
Beans, edible	6	.....	.....
Coffee	65	79	119
Cotton, raw	3	5	12
Molasses	4	19	79
Oilseeds	2	1	1
Peas, dry	10	21	.....
Sugar	24	.....	53
Miscellaneous	44	52	57
Clay, fire and china .....	.....	.....	3
Groceries, miscellaneous .....	.....	1	5
Oil, fish	11	.....	6
Oil, vegetable	4	.....	.....
Seeds, excluding oilseeds	1	5	2
Container cargo	24	46	37
All other and unclassified	4	.....	4
Total	886	849	995
WEST COAST CENTRAL AMERICA TO AFRICA:			
Canned and refrigerated foods .....	.....	1	6
Refrigerated foods .....	.....	1	6
Fish .....	.....	1	6
Grains	10	14	26
Corn	10	14	.....
Wheat .....	.....	.....	26
Lumber and products	8	8	6

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST CENTRAL AMERICA TO AFRICA—			
Continued			
Lumber and products—Continued			
Boards and planks	8	8	6
Other agricultural commodities	68	109	84
Cotton, raw	11	.....	.....
Sugar	57	109	84
Miscellaneous .....	.....	3	2
Seeds, excluding oilseeds .....	.....	3	.....
Container cargo .....	.....	.....	1
All other and unclassified .....	.....	.....	1
Total	86	135	124
WEST COAST CENTRAL AMERICA TO ASIA			
(MIDDLE EAST):			
Canned and refrigerated foods	1	2	.....
Refrigerated foods	1	2	.....
Bananas	1	1	.....
Fish .....	.....	1	.....
Other agricultural commodities .....	.....	3	.....
Oilseeds .....	.....	3	.....
Petroleum products .....	.....	24	.....
Jet fuel .....	.....	24	.....
Miscellaneous .....	.....	1	.....
All other and unclassified .....	.....	1	.....
Total	1	30	.....
WEST COAST SOUTH AMERICA TO EAST COAST			
UNITED STATES:			
Canned and refrigerated foods	876	1,051	1,085
Canned foods	17	8	7
Fish .....	.....	2	2
Fruit	14	5	3
Vegetables, canned	2	1	2
Canned foods, miscellaneous	1	.....	.....
Refrigerated foods	859	1,043	1,078
Bananas	392	579	580
Fish	14	22	23
Fruit, excluding bananas	371	383	419
Other and unclassified	82	59	56
Chemicals and petroleum chemicals	206	51	96
Chemicals, miscellaneous	188	47	94
Petroleum chemicals, miscellaneous	18	4	2
Grains, miscellaneous .....	.....	.....	1
Lumber and products	73	80	59
Boards and planks	16	34	35
Plywood, veneers, composition board	10	8	12
Pulpwood	42	34	5
Other and unclassified	5	4	7
Machinery and equipment .....	.....	7	1
Agricultural machinery and implements .....	.....	3	.....
Automobiles, trucks, accessories and parts .....	.....	2	.....
Construction machinery and equipment .....	.....	2	1

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO EAST COAST UNITED STATES—Continued			
Manufactures of iron and steel		1	28
Nails, tacks and spikes			1
Tubes, pipes and fittings		1	3
Wire, bars and rods			2
Other and unclassified			22
Minerals, miscellaneous	302	588	810
Salt	292	582	810
Soda and sodium compounds	10	6	.....
Nitrates, phosphates and potash	195	185	286
Fishmeal	16	27	74
Nitrate of soda	177	132	190
Potash	2	10	6
Fertilizers, miscellaneous .....	.....	16	16
Ores and metals	426	468	428
Ores	274	343	247
Copper	15	3	10
Iron	178	275	173
Lead	6	.....	.....
Zinc	48	18	9
Other and unclassified	27	47	55
Metals	152	125	181
Aluminum .....	.....	4	.....
Copper	95	98	158
Iron	22	.....	.....
Lead	8	.....	2
Zinc	26	23	21
Other and unclassified	1	.....	.....
Other agricultural commodities	261	370	617
Beans, edible .....	.....	.....	1
Cocoa and cacao beans	12	31	33
Coffee	94	98	106
Cotton, raw	3	.....	2
Molasses	45	21	55
Skin and hides .....	.....	.....	18
Sugar	107	220	401
Wool, raw .....	.....	.....	1
Petroleum and petroleum products	2,003	2,750	4,593
Crude oil	929	1,667	2,213
Diesel oil	17	.....	28
Fuel oil, residual	1,039	1,082	2,250
Gasoline	18	1	54
Other and unclassified .....	.....	.....	48
Miscellaneous	836	692	701
Bricks and tile .....	.....	.....	4
Fibers, plant .....	.....	1	.....
Groceries, miscellaneous	1	1	5
Liquors and wines	10	3	4
Marble and stone	1	.....	1
Oil, fish	4	4	5
Oil, vegetable	1	9	18
Paper and paper products	1	12	4
Slag, clinkers and dross .....	.....	.....	28
Textiles	2	2	5

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO EAST COAST			
UNITED STATES—Continued			
Miscellaneous—Continued			
Container cargo	771	608	598
All other and unclassified	45	52	29
Total	<u>5,178</u>	<u>6,243</u>	<u>8,705</u>
WEST COAST SOUTH AMERICA TO EAST COAST			
CANADA:			
Lumber and products	9	.....	.....
Pulpwood	9	.....	.....
Nitrates, phosphates and potash	11	6	.....
Nitrate of soda	11	6	.....
Ores and metals	4	5	21
Ores	4	5	15
Copper .....	.....	5	15
Lead	4	.....	.....
Metals .....	.....	.....	6
Copper .....	.....	.....	6
Petroleum and petroleum products	53	.....	27
Crude oil	53	.....	.....
Fuel oil, residual .....	.....	.....	27
Miscellaneous	4	5	4
Liquors and wines	3	3	3
Container cargo .....	.....	1	.....
All other and unclassified	1	1	1
Total	<u>81</u>	<u>16</u>	<u>52</u>
WEST COAST SOUTH AMERICA TO EAST COAST			
CENTRAL AMERICA:			
Canned and refrigerated foods	3	.....	.....
Canned foods	1	.....	.....
Fruit	1	.....	.....
Refrigerated foods, miscellaneous	2	.....	.....
Chemicals and petroleum chemicals .....	.....	.....	1
Chemicals, unclassified .....	.....	.....	1
Lumber and products	5	.....	1
Boards and planks	3	.....	.....
Plywood, veneers, composition board	1	.....	1
Other and unclassified	1	.....	.....
Manufactures of iron and steel .....	.....	2	.....
Plates, sheets and coils .....	.....	2	.....
Nitrates, phosphates and potash	15	.....	3
Fishmeal	3	.....	.....
Nitrate of soda	12	.....	2
Fertilizers, miscellaneous .....	.....	.....	1
Ores and metals	96	48	30
Ores	70	33	28
Copper	3	2	.....
Lead	50	25	13
Tin .....	.....	1	2
Zinc .....	.....	5	13
Other and unclassified	17	.....	.....

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO EAST COAST			
CENTRAL AMERICA—Continued			
Ores and metals—Continued			
Metals	26	15	2
Copper	19	10	2
Lead	3	.....	.....
Zinc	4	5	.....
Other agricultural commodities .....	.....	.....	5
Coffee .....	.....	.....	1
Sugar .....	.....	.....	4
Petroleum and petroleum products	1,112	850	903
Crude oil	1,089	825	842
Fuel oil, residual .....	.....	25	56
Gasoline	23	.....	5
Miscellaneous	56	61	65
Flour, wheat	1	.....	.....
Oil, fish	23	22	31
Oil, vegetable	2	6	9
Paper and paper products .....	.....	.....	1
Container cargo	27	26	21
All other and unclassified	3	7	3
Total	1,287	961	1,008
WEST COAST SOUTH AMERICA TO EAST COAST			
SOUTH AMERICA:			
Canned and refrigerated foods	35	13	17
Canned foods	3	2	.....
Fish	1	1	.....
Fruit	2	1	.....
Refrigerated foods	32	11	17
Bananas	4	2	8
Fish	9	2	5
Fruit, excluding bananas	17	7	4
Other and unclassified	2	.....	.....
Chemicals and petroleum chemicals	5	1	6
Chemicals, unclassified	5	1	6
Grains	3	.....	7
Soybeans	1	.....	7
Other and unclassified	2	.....	.....
Lumber and products	53	24	36
Boards and planks	14	5	5
Plywood, veneers, composition board	7	2	.....
Pulpwood	29	17	31
Other and unclassified	3	.....	.....
Machinery and equipment	1	.....	.....
Construction machinery and equipment	1	.....	.....
Manufactures of iron and steel	2	1	1
Angles, shapes and sections	1	.....	.....
Wires, bars and rods	1	.....	.....
Other and unclassified .....	.....	1	1
Minerals, miscellaneous .....	.....	.....	2
Borax .....	.....	.....	2
Nitrates, phosphates and potash	3	2	5

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO EAST COAST			
SOUTH AMERICA—Continued			
Nitrates, phosphates and potash—Continued			
Ammonium compounds .....	.....	.....	2
Fishmeal	1	.....	3
Nitrate of soda	2	2	.....
Ores and metals	96	98	56
Ores	43	64	30
Copper	11	13	.....
Lead	2	.....	.....
Zinc .....	.....	11	2
Other and unclassified	30	40	28
Metals	53	34	26
Aluminum	1	.....	.....
Copper	26	14	6
Lead	4	6	6
Tin, including tinplate	1	.....	.....
Zinc	19	13	13
Other and unclassified	2	1	1
Other agricultural commodities	211	83	27
Beans, edible	6	4	3
Coffee	32	.....	.....
Molasses	30	.....	.....
Sugar	143	79	24
Petroleum and petroleum products	360	25	10
Crude oil	357	17	.....
Gasoline	3	.....	10
Liquefied gas .....	.....	8	.....
Miscellaneous	91	81	59
Cement .....	.....	3	1
Liquors and wines	2	2	.....
Marble and stone .....	.....	.....	1
Oil, fish .....	.....	3	1
Oil, vegetable	11	31	24
Paper and paper products	8	7	7
Textiles	1	1	.....
Container cargo	51	26	15
All other and unclassified	18	8	10
Total	860	328	226
WEST COAST SOUTH AMERICA TO CRISTOBAL, R.P.:			
Canned and refrigerated foods, miscellaneous .....	.....	1	.....
Ores and metals, miscellaneous .....	.....	.....	1
Petroleum and petroleum products .....	.....	59	.....
Crude oil .....	.....	50	.....
Diesel oil .....	.....	8	.....
Gasoline .....	.....	1	.....
Miscellaneous	12	9	6
Container cargo	10	6	5
All other and unclassified	2	3	1
Total	12	69	7
WEST COAST SOUTH AMERICA TO WEST INDIES:			
Canned and refrigerated foods	27	20	42
Refrigerated foods	27	20	42

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO WEST INDIES—			
Continued			
Canned and refrigerated foods—Continued			
Refrigerated foods—Continued			
Bananas	3	.....	.....
Fish	15	13	35
Fruit, excluding bananas	6	6	5
Other and unclassified	3	1	2
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	3
Lumber and products	24	38	75
Boards and planks	15	35	46
Plywood, veneers, composition board	2	3	3
Pulpwood .....	.....	.....	3
Other and unclassified	7	.....	23
Nitrates, phosphates and potash .....	.....	3	28
Fishmeal .....	.....	.....	28
Fertilizers, unclassified .....	.....	3	.....
Ores and metals	110	.....	.....
Ores	110	.....	.....
Iron	76	.....	.....
Manganese	34	.....	.....
Other agricultural commodities	19	21	14
Beans, edible	16	11	3
Molasses .....	.....	6	5
Sugar	3	4	6
Petroleum and petroleum products	1,433	2,693	3,797
Crude oil	792	1,919	3,316
Diesel oil	20	45	.....
Fuel oil, residual	561	682	453
Gasoline	11	45	28
Jet fuel .....	.....	2	.....
Other and unclassified	49	.....	.....
Miscellaneous	16	14	27
Groceries, miscellaneous	1	1	1
Oil, vegetable .....	.....	1	.....
Paper and paper products .....	.....	2	2
Tallow .....	.....	1	.....
Container cargo	10	9	15
All other and unclassified	5	.....	9
Total	1,629	2,789	3,986
WEST COAST SOUTH AMERICA TO EUROPE:			
Canned and refrigerated foods	1,960	1,958	1,541
Canned foods	8	35	22
Fish	4	16	16
Fruit	1	6	1
Vegetables, canned	3	11	5
Other and unclassified .....	.....	2	.....
Refrigerated foods	1,952	1,923	1,519
Bananas	1,208	954	553
Fish	56	342	483
Fruit, excluding bananas	577	496	347
Meat	1	.....	.....
Other and unclassified	110	131	136

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO EUROPE—			
Continued			
Chemicals and petroleum chemicals	6	14	22
Chemicals, unclassified	6	14	7
Petroleum chemicals, miscellaneous .....	.....	.....	15
Coal and coke (excluding petroleum coke)	18	.....	.....
Coke	18	.....	.....
Grains	1	1	1
Corn	1	1	1
Lumber and products	495	620	557
Boards and planks	83	263	238
Plywood, veneers, composition board	66	21	14
Pulpwood	311	143	190
Other and unclassified	35	193	115
Machinery and equipment, miscellaneous	1	1	1
Manufactures of iron and steel	1	.....	4
Plates, sheets and coils .....	.....	.....	4
Wire, bars and rods	1	.....	.....
Minerals, miscellaneous	29	5	.....
Borax .....	.....	1	.....
Salt	29	.....	.....
Soda and sodium compounds .....	.....	4	.....
Nitrates, phosphates and potash	789	870	1,303
Fishmeal	602	731	1,128
Nitrate of soda	175	132	160
Potash .....	.....	6	1
Fertilizers, unclassified	12	1	14
Ores and metals	1,942	1,875	1,845
Ores	1,416	1,008	1,014
Copper	607	311	263
Iron .....	.....	.....	107
Lead	22	55	59
Tin .....	.....	2	10
Zinc	721	574	545
Other and unclassified	66	66	30
Metals	526	867	831
Copper	477	739	662
Iron	4	9	12
Lead	15	32	30
Scrap .....	.....	.....	27
Tin, including tinplate .....	.....	4	1
Zinc	19	72	96
Other and unclassified	11	11	3
Other agricultural commodities	71	151	184
Beans, edible	1	1	1
Cocoa and cacao beans	3	3	2
Cotton, raw	1	.....	.....
Coffee	62	129	156
Cotton, raw	1	15	11
Oilseeds	2	.....	10
Skins and hides .....	.....	2	2
Wool, raw	1	1	2
Petroleum products .....	.....	31	3
Diesel oil .....	.....	2	3

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO EUROPE—			
Continued			
Petroleum products—Continued			
Fuel oil, residual		2	
Gasoline		22	
Other and unclassified		5	
Miscellaneous	843	824	819
Bricks and tile	6		1
Carbon black		3	
Fibers, plant			8
Flour, wheat	1		
Groceries, miscellaneous	9	33	1
Liquors and wines	3	1	1
Marble and stone			1
Oil, fish	40	90	113
Paper and paper products	30	91	33
Textiles	1	9	5
Container cargo	642	531	599
All other and unclassified	111	66	57
Total	6,156	6,350	6,280
WEST COAST SOUTH AMERICA TO AFRICA:			
Canned and refrigerated foods	17	20	22
Refrigerated foods	17	20	22
Bananas	3	6	1
Fish			9
Fruit, excluding bananas	14	14	12
Lumber and products	46	48	
Boards and planks	36	43	
Other and unclassified	10	5	
Nitrates, phosphates and potash			4
Ores and metals	57	47	51
Ores	47	47	45
Lead	6	9	
Zinc	41	38	45
Metals	10		6
Zinc	10		6
Other agricultural commodities		2	10
Coffee		2	10
Petroleum products	6		
Jet fuel	6		
Miscellaneous	2	1	1
All other and unclassified	2	1	1
Total	128	118	88
WEST COAST SOUTH AMERICA TO ASIA (MIDDLE EAST):			
Canned and refrigerated foods	21	23	27
Refrigerated foods	21	23	27
Bananas	16	23	24
Fish	5		
Fruit, excluding bananas			3
Nitrates, phosphates and potash	32	21	10
Fishmeal	32	21	10

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
WEST COAST SOUTH AMERICA TO ASIA— (MIDDLE EAST)—Continued			
Miscellaneous .....	.....	.....	8
Paper and paper products .....	.....	.....	4
All other and unclassified .....	.....	.....	4
Total	53	43	45
HAWAII TO EAST COAST UNITED STATES:			
Other agricultural commodities	29	93	209
Sugar	29	93	209
Petroleum products, miscellaneous	34	.....	.....
Total	63	93	209
OCEANIA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	429	486	451
Canned foods, miscellaneous .....	.....	1	.....
Refrigerated foods	429	485	451
Fish	1	.....	.....
Fruit, excluding bananas	41	41	47
Meat	93	110	39
Other and unclassified	294	334	365
Chemicals and petroleum chemicals, miscellaneous .....	.....	83	20
Coal and coke (excluding petroleum coke)	170	170	170
Coal .....	.....	.....	3
Coke	170	170	167
Manufactures of iron and steel	164	140	62
Plates, sheets and coils	69	87	38
Wire, bars and rods	54	53	24
Other and unclassified	41	.....	.....
Minerals, miscellaneous	3	1	.....
Soda and sodium compounds	3	1	.....
Ores and metals	731	1,657	2,251
Ores	715	1,647	2,227
Alumina/bauxite	285	1,237	1,639
Chrome .....	.....	.....	2
Manganese	57	67	103
Zinc	10	.....	.....
Other and unclassified	363	343	483
Metals	16	10	24
Iron .....	.....	8	.....
Lead	8	.....	7
Zinc .....	.....	.....	14
Other and unclassified	8	2	3
Other agricultural commodities	261	378	418
Cocoa and cacao beans .....	.....	5	3
Molasses	131	234	266
Sugar	130	138	149
Wool, raw .....	.....	1	.....
Petroleum products	173	116	160
Gasoline	22	116	16
Liquefied gas	64	.....	128
Lubricating oil .....	.....	.....	16
Petroleum coke	87	.....	.....
Miscellaneous	376	284	312

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
OCEANIA TO EAST COAST UNITED STATES—			
Continued			
Miscellaneous—Continued			
Clay, fire and china			56
Oil, vegetable	4		
Slag, clinkers and dross		2	
Container cargo	364	276	244
All other and unclassified	8	6	12
Total	<u>2,307</u>	<u>3,315</u>	<u>3,844</u>
OCEANIA TO EAST COAST CANADA:			
Canned and refrigerated foods	20	47	54
Refrigerated foods	20	47	54
Meat		1	
Other and unclassified	20	46	54
Minerals, miscellaneous		27	
Sulfur		27	
Ores and metals	134	59	155
Ores	134	59	154
Alumina/bauxite	107	52	69
Chrome			3
Copper	9		
Manganese			65
Other and unclassified	18	7	17
Other agricultural commodities	246	307	320
Sugar	246	307	320
Miscellaneous	23	42	45
Container cargo	23	42	45
Total	<u>423</u>	<u>481</u>	<u>574</u>
OCEANIA TO EAST COAST CENTRAL AMERICA:			
Canned and refrigerated foods	36	17	68
Canned foods	13	13	63
Milk	9	13	63
Canned food, miscellaneous	4		
Refrigerated foods	23	4	5
Dairy products	23	3	5
Fruit, excluding bananas		1	
Manufactures of iron and steel, miscellaneous		1	
Ores and metals	22	113	221
Lead	5		
Manganese ore		63	131
Ores, miscellaneous	17	50	90
Other agricultural commodities	16		17
Oilseeds	16		17
Petroleum products			1
Lubricating oil			1
Miscellaneous		1	4
Container cargo			3
All other and unclassified		1	1
Total	<u>74</u>	<u>132</u>	<u>311</u>
OCEANIA TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	32	28	13

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
OCEANIA TO EAST COAST SOUTH AMERICA—			
Continued			
Canned and refrigerated foods—Continued			
Canned foods	22	25	7
Milk	22	25	7
Refrigerated foods	10	3	6
Dairy products	10	3	6
Grains	5	19	33
Barley		19	33
Oats	5		
Ores and metals		53	815
Ores		53	815
Alumina/bauxite		53	813
Other and unclassified			2
Other agricultural commodities			53
Sugar			53
Miscellaneous		1	
Container cargo		1	
Total	37	100	913
OCEANIA TO WEST INDIES:			
Canned and refrigerated foods	94	77	36
Canned foods	24	9	7
Milk	20	9	6
Other and unclassified	4		1
Refrigerated foods	70	68	29
Dairy products	14	21	1
Fish	51	28	12
Other and unclassified	5	19	16
Other agricultural commodities	16		
Molasses	16		
Petroleum products, miscellaneous	35		
Miscellaneous	12	13	10
Container cargo	12	13	10
Total	156	89	47
OCEANIA TO EUROPE:			
Canned and refrigerated foods	314	347	316
Canned foods		6	
Fruit		3	
Vegetables, canned		3	
Refrigerated foods	314	341	316
Bananas			3
Dairy products		20	
Fish	4		
Fruit, excluding bananas	267	296	290
Meat	7	2	3
Other and unclassified	36	23	20
Chemicals and petroleum chemicals, miscellaneous		93	61
Coal and coke (excluding petroleum coke)			38
Coal			38
Grains			32
Barley			32

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
OCEANIA TO EUROPE—Continued			
Lumber and products	30	6	9
Boards and planks		2	3
Plywood, veneers, composition board		2	2
Pulpwood	30	2	4
Machinery and equipment, miscellaneous		1	
Ores and metals	27	50	57
Ores	15	21	53
Lead			27
Zinc		8	5
Other and unclassified	15	13	21
Metals	12	29	4
Copper	12	17	4
Lead		10	
Other and unclassified		2	
Other agricultural commodities	223	184	250
Cocoa and cacao beans			1
Coffee			1
Copra and coconuts		6	7
Molasses	29		85
Sugar	194	178	153
Wool, raw			3
Petroleum products		1	
Asphalt		1	
Miscellaneous	239	142	177
Clay, fire and china			6
Groceries, miscellaneous	14	10	
Oil, vegetable	1		
Paper and paper products	3	6	5
Tallow		2	6
Container cargo	219	124	160
All other and unclassified	2		
Total	833	824	940
OCEANIA TO AFRICA:			
Canned and refrigerated foods	23	24	
Canned foods	4	20	
Milk	4	20	
Refrigerated foods	19	4	
Dairy products	18	2	
Fruit, excluding bananas		1	
Meat	1	1	
Total	23	24	
ASIA TO EAST COAST UNITED STATES:			
Canned and refrigerated foods	116	99	123
Refrigerated foods	116	99	123
Fish	1		
Other and unclassified	115	99	123
Chemicals and petroleum chemicals	265	214	147
Chemicals, unclassified	236	192	118
Petroleum chemicals, miscellaneous	29	22	29
Coal and coke (excluding petroleum coke)	1,292	805	580
Coal	51	8	

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
ASIA TO EAST COAST UNITED STATES—Continued			
Coal and coke (excluding petroleum coke)—Continued			
Coke	1,241	797	580
Grains	33	.....	.....
Rice	33	.....	.....
Lumber and products	583	500	575
Boards and planks	18	13	32
Plywood, veneers, composition board	559	487	524
Other and unclassified	6	.....	19
Machinery and equipment	1,177	1,305	1,378
Agricultural machinery and implements	1	3	9
Automobiles, trucks, accessories and parts	1,135	1,226	1,252
Construction machinery and equipment	22	32	86
Electrical machinery and apparatus	3	15	2
Other and unclassified	16	29	29
Manufactures of iron and steel	2,275	2,392	2,522
Angles, shapes and sections	75	94	63
Nails, tacks and spikes	34	25	48
Plates, sheets and coils	1,101	1,006	1,212
Tubes, pipes and fittings	248	271	285
Wire, bars and rods	160	133	121
Other and unclassified	657	863	793
Minerals, miscellaneous	1	1	.....
Soda and sodium compounds	1	1	.....
Nitrates, phosphates and potash	25	.....	.....
Phosphates	25	.....	.....
Ores and metals	1,219	1,639	1,650
Ores	1,195	1,612	1,621
Alumina/bauxite	306	275	454
Chrome	22	12	28
Copper	98	.....	.....
Manganese	35	35	12
Other and unclassified	734	1,290	1,127
Metals	24	27	29
Aluminum	5	4	11
Copper .....	.....	10	8
Tin, including tinplate	3	2	3
Other and unclassified	16	11	7
Other agricultural commodities	170	289	247
Beans, edible .....	.....	.....	1
Cocoa and cacao beans	23	5	1
Coffee .....	.....	.....	1
Oilseeds	1	.....	.....
Rubber, raw	44	34	46
Sugar	102	250	198
Petroleum products	595	244	161
Asphalt	4	.....	.....
Fuel oil, residual	478	53	.....
Gasoline	43	19	55
Liquefied gas	28	6	.....
Lubricating oil	9	16	22
Petroleum coke	29	120	84
Other and unclassified	4	30	.....
Miscellaneous	5,107	5,058	5,132

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
ASIA TO EAST COAST UNITED STATES—Continued			
Miscellaneous—Continued			
Bricks and tile	2	2	3
Clay, fire and china .....	.....	1	.....
Flour, wheat	6	.....	.....
Glass and glassware .....	.....	2	.....
Oil, coconut	16	44	60
Oil, fish	6	.....	.....
Oil, vegetable	72	47	92
Rubber, manufactured .....	.....	.....	6
Slag, clinkers and dross	12	3	.....
Wax, paraffin	5	3	2
Container cargo	4,828	4,831	4,871
All other and unclassified	160	125	98
Total	<u>12,858</u>	<u>12,546</u>	<u>12,515</u>
ASIA TO EAST COAST CANADA:			
Canned and refrigerated foods	3	4	4
Refrigerated foods	3	4	4
Fish	1	1	.....
Other and unclassified	2	3	4
Chemicals and petroleum chemicals, miscellaneous .....	.....	.....	1
Coal and coke (excluding petroleum coke) .....	.....	9	.....
Coal .....	.....	9	.....
Machinery and equipment .....	.....	12	5
Construction machinery and equipment .....	.....	8	3
Electrical machinery and apparatus .....	.....	1	1
Other and unclassified .....	.....	3	1
Manufactures of iron and steel	13	11	.....
Angles, shapes and sections	2	.....	.....
Plates, sheets and coils	7	1	.....
Wires, bars and rods	4	.....	.....
Other and unclassified .....	.....	10	.....
Ores and metals	221	199	209
Ores	189	199	209
Alumina/bauxite	48	46	45
Chrome	6	7	13
Copper	65	10	10
Other and unclassified	70	136	141
Metals	32	.....	.....
Copper	32	.....	.....
Miscellaneous	174	306	373
Oil, vegetable .....	.....	.....	1
Container cargo	158	305	369
All other and unclassified	16	1	3
Total	<u>411</u>	<u>541</u>	<u>593</u>
ASIA TO EAST COAST CENTRAL AMERICA:			
Chemicals and petroleum chemicals	117	60	4
Chemicals unclassified	114	59	1
Petroleum chemicals, miscellaneous	3	1	3
Coal and coke (excluding petroleum coke) .....	.....	.....	15
Coal .....	.....	.....	15
Grains	67	28	15

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
ASIA TO EAST COAST CENTRAL AMERICA—			
Continued			
Grains—Continued			
Rice	67	28	15
Machinery and equipment, miscellaneous .....	.....	.....	1
Manufactures of iron and steel	1	.....	1
Plates, sheets and coils .....	.....	.....	1
Tubes, pipes and fittings	1	.....	.....
Ores and metals	8	98	.....
Ores	8	98	.....
Alumina/bauxite	8	20	.....
Other and unclassified .....	.....	78	.....
Miscellaneous	29	30	40
Clay, fire and china .....	.....	4	.....
Oil, coconut	1	2	9
Oil vegetable	22	17	22
Wax, paraffin .....	.....	1	5
Container cargo	6	4	3
All other and unclassified .....	.....	2	1
Total	222	216	74
ASIA TO EAST COAST SOUTH AMERICA:			
Canned and refrigerated foods	1	2	1
Refrigerated foods	1	2	1
Fish .....	.....	1	.....
Other and unclassified	1	1	1
Chemicals and petroleum chemicals	2	2	2
Chemicals, miscellaneous	1	2	2
Petroleum chemicals, miscellaneous	1	.....	.....
Coal and coke (excluding petroleum coke)	1	.....	.....
Coke	1	.....	.....
Grains	33	.....	.....
Rice	33	.....	.....
Machinery and equipment	56	33	17
Agricultural machinery and implements	1	.....	1
Automobiles, trucks, accessories and parts	42	22	8
Construction machinery and equipment	3	3	2
Electrical machinery and apparatus	4	5	3
Motorcycles, bicycles and parts	2	2	2
Other and unclassified	4	1	1
Manufactures of iron and steel	35	43	49
Angles, shapes and sections .....	.....	.....	1
Plates, sheets and coils	12	8	12
Tubes, pipes and fittings	18	25	24
Wires, bars and rods	1	3	2
Other and unclassified	4	7	10
Nitrates, phosphates and potash .....	.....	.....	1
Fertilizers, unclassified .....	.....	.....	1
Ores and metals	108	117	48
Ores	107	116	45
Alumina/bauxite	15	23	20
Manganese	4	7	3
Other and unclassified	88	86	22

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
ASIA TO EAST COAST SOUTH AMERICA—			
Continued			
Ores and metals—Continued			
Metals	1	1	3
Tin, including tinplate	1	.....	1
Other and unclassified .....	.....	1	2
Miscellaneous	219	187	104
Carbon black	1	.....	1
Clay, fire and china	1	.....	.....
Oil, vegetable	18	6	3
Resin	1	1	.....
Rubber, manufactured	2	1	2
Textiles .....	.....	.....	1
Wax, paraffin	11	.....	.....
Container cargo	116	123	74
All other and unclassified	69	56	23
Total	455	384	221
ASIA TO CRISTOBAL, R.P.:			
Lumber and products, miscellaneous .....	.....	1	1
Machinery and equipment	2	2	.....
Automobiles, trucks, accessories and parts	1	2	.....
Electrical machinery and apparatus	1	.....	.....
Manufactures of iron and steel	22	24	13
Angles, shapes and sections	5	.....	.....
Plates, sheets and coils	11	15	9
Tubes, pipes and fittings .....	.....	3	2
Wire, bars and rods .....	.....	1	2
Other and unclassified	6	5	.....
Ores and metals	1	2	1
Metals	1	2	1
Iron .....	.....	1	.....
Tin, including tinplate	1	1	1
Miscellaneous	449	355	300
Textiles .....	.....	.....	1
Container cargo	427	345	286
All other and unclassified	22	10	13
Total	474	384	317
ASIA TO WEST INDIES:			
Canned and refrigerated foods	22	37	47
Canned foods	15	19	16
Fish .....	.....	4	3
Fruit .....	.....	1	.....
Other and unclassified	15	14	13
Refrigerated foods	7	18	31
Fish	2	14	25
Meat .....	.....	3	3
Other and unclassified	5	1	3
Chemicals and petroleum chemicals	14	4	18
Caustic soda	13	1	.....
Chemical, unclassified	1	2	18
Petroleum chemicals, miscellaneous .....	.....	1	.....
Coal and coke (excluding petroleum coke)	5	.....	11

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
ASIA TO WEST INDIES—Continued			
Coal and coke (excluding petroleum coke)—Continued			
Coal	5	.....	11
Grains	293	271	337
Corn	3	2	3
Rice	271	224	230
Soybeans	19	39	90
Other and unclassified .....	.....	6	14
Lumber and products	14	83	225
Boards and planks	6	81	213
Plywood, veneers, composition board	1	2	4
Pulpwood	7	.....	3
Other and unclassified .....	.....	.....	5
Machinery and equipment	152	133	119
Agricultural machinery and implements	1	1	2
Automobiles, trucks, accessories and parts	126	104	105
Construction machinery and equipment	3	3	5
Electrical machinery and apparatus	1	3	4
Motorcycles, bicycles and parts	21	21	.....
Other and unclassified .....	.....	1	3
Manufactures of iron and steel	19	24	62
Angles, shapes and sections .....	.....	1	1
Nails, tacks and spikes .....	.....	2	2
Plates, sheets and coils	6	10	27
Tubes, pipes and fittings	5	6	18
Wires, bars and rods .....	.....	2	14
Other and unclassified	8	3	.....
Minerals, miscellaneous .....	.....	2	2
Borax .....	.....	.....	1
Soda and sodium compounds .....	.....	2	1
Nitrates, phosphates and potash	1	8	5
Ammonium compounds .....	.....	.....	2
Fertilizers, unclassified	1	8	3
Ores and metals	5	9	13
Ores, miscellaneous	3	7	8
Metals	2	2	5
Lead .....	.....	1	.....
Tin, including tinplate	1	1	4
Zinc	1	.....	.....
Other and unclassified .....	.....	.....	1
Other agricultural commodities	58	38	89
Beans, edible	58	35	36
Cotton, raw .....	.....	1	1
Oilseeds .....	.....	.....	51
Rubber, raw .....	.....	2	1
Petroleum products	21	19	.....
Gasoline	21	19	.....
Miscellaneous	333	310	360
Bricks and tile	2	1	4
Carbon black	1	7	.....
Cement	1	1	3
Clay, fire and china .....	.....	1	6
Fibers, plant	5	2	4
Glass and glassware	4	2	5

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	Fiscal year		
	1992	1991	1990
ASIA TO WEST INDIES—Continued			
Miscellaneous—Continued			
Groceries, miscellaneous	2	5	1
Oil, vegetable	32	20	9
Paper and paper products		5	17
Porcelainware		1	1
Rubber, manufactured	3	4	8
Seeds, excluding oilseeds		15	.....
Textiles	2	5	2
Wax, paraffin	1	1	1
Container cargo	190	185	212
All other and unclassified	90	55	87
Total	937	938	1,288
ASIA TO EUROPE:			
Canned and refrigerated foods	31	9	5
Refrigerated foods	31	9	5
Fish	28	6	5
Other and unclassified	3	3	.....
Chemicals and petroleum chemicals	63	78	72
Caustic soda		1	.....
Chemicals, unclassified	47	65	49
Petroleum chemicals, miscellaneous	16	12	23
Coal and coke (excluding petroleum coke)	21	.....	52
Coal			52
Coke	21	.....	.....
Machinery and equipment	19	23	27
Agricultural machinery and implements .....		.....	3
Automobiles, trucks, accessories and parts	16	16	14
Construction machinery and equipment	3	6	7
Other and unclassified		1	3
Manufactures of iron and steel	50	60	.....
Plates, sheets and coils		8	.....
Tubes, pipes and fittings	50	28	.....
Wire, bars and rods		4	.....
Other and unclassified		20	.....
Other agricultural commodities	6	.....	.....
Copra and coconuts	6	.....	.....
Ores and metals .....	.....	21	18
Ores .....	.....	16	18
Iron .....	.....	.....	4
Other and unclassified .....	.....	16	14
Metals .....	.....	5	.....
Copper .....	.....	3	.....
Other and unclassified .....	.....	2	.....
Petroleum products	1	5	.....
Fuel oil, residual .....	.....	1	.....
Liquefied gas .....	.....	1	.....
Lubricating oil .....	.....	3	.....
Other and unclassified	1	.....	.....
Miscellaneous	155	194	170
Oil, coconut .....	.....	.....	1
Oil, fish	26	24	54
Oil, vegetable	2	.....	1

**Table 11.—Important Commodity Shipments over Principal Trade Routes
Pacific to Atlantic—Continued**

[Thousands of long tons]

	<i>Fiscal year</i>		
	<i>1992</i>	<i>1991</i>	<i>1990</i>
ASIA TO EUROPE—Continued			
Miscellaneous—Continued			
Seeds, excluding oilseeds .....	.....	.....	8
Wax, paraffin	15	.....	.....
Container cargo	102	163	97
All other and unclassified	10	7	9
Total	<u>346</u>	<u>390</u>	<u>343</u>

Table 12.—Principal Canal Commodities by Direction—Fiscal Year 1992

[Long tons]

<i>Commodity</i>	<i>Atlantic to Pacific</i>	<i>Pacific to Atlantic</i>	<i>Total</i>
Ammonium compounds	647,739	18,725	666,464
Asbestos	11,943	3,108	15,051
Asphalt	108,085	10,123	118,208
Automobiles, trucks, and accessories	277,304	1,323,197	1,600,501
Bananas	8,092	2,144,629	2,152,721
Barley	90,764	112,073	202,837
Beans, edible	10,453	105,501	115,954
Benzene	72,002	22,834	94,836
Borax	652	367,552	368,204
Bricks and tile	25,925	10,943	36,868
Canned food products	33,349	123,995	157,344
Carbon black	112,882	2,004	114,886
Caustic soda	733,538	96,092	829,630
Cement	317,553	1,959	319,512
Chemicals, petroleum various	1,087,056	134,232	1,221,288
Chemicals, various	4,277,070	1,191,822	5,468,892
Clay, fire and china	724,352	16,355	740,707
Coal and coke (excluding petroleum coke)	4,424,136	4,483,890	8,908,026
Cocoa and cacao beans	2,034	38,364	40,398
Coffee	5,856	280,783	286,639
Coke, petroleum	894,752	2,610,460	3,505,212
Container cargo	12,039,493	9,836,807	21,876,300
Copra and coconuts .....	.....	6,895	6,895
Corn	14,328,763	28,803	14,357,566
Cotton, raw	40,570	77,044	117,614
Fertilizers, various	2,573,269	38,512	2,611,781
Fibers, plant	2,150	6,061	8,211
Fishmeal .....	.....	657,792	657,792
Flour, wheat	272,132	59,222	331,354
Gasoline	1,640,209	660,859	2,301,068
Glass and glassware	7,753	4,072	11,825
Grains, various	501,060	97,931	598,991
Groceries, various	45,733	41,881	87,614
Infusorial earth	6	120	126
Jet fuel	1,031,022	52,587	1,083,609
Kerosene	33,384	115,042	148,426
Liquefied gas	1,085,195	155,019	1,240,214
Liquors and wines	2,424	22,485	24,909
Lumber and products (excluding pulpwood)	3,144,975	2,949,210	6,094,185
Machinery, agricultural	27,270	3,603	30,873
Machinery, construction	98,572	35,281	133,853
Machinery, electrical	22,342	8,608	30,950
Machinery, various	91,241	46,291	137,532
Manufactures of iron and steel	3,854,205	2,817,198	6,671,403
Marble and stone	126,846	802	127,648
Metal, aluminum	464,750	9,221	473,971
Metal, copper	6,733	703,934	710,667
Metal, iron	242,972	43,414	286,386
Metal, lead	2,466	66,399	68,865
Metal, zinc	4,273	164,990	169,263
Metal, scrap	1,423,872	2,195	1,426,067
Metals, various (including tinplate)	58,605	78,888	137,493
Molasses	12,185	647,068	659,253
Nitrate of soda	58,400	387,720	446,120
Oats	36,669	6,735	43,404
Oil, coconut	1,459	17,371	18,830
Oil, crude	4,346,349	3,936,327	8,282,676
Oil, diesel	1,300,167	538,409	1,838,576
Oil, fish	483	115,046	115,529

**Table 12.—Principal Canal Commodities by Direction—Fiscal Year 1992—
Continued**

[Long tons]

<i>Commodity</i>	<i>Atlantic to Pacific</i>	<i>Pacific to Atlantic</i>	<i>Total</i>
Oil, lubricating	566,335	212,511	778,846
Oil, residual fuel	2,054,696	3,287,059	5,341,755
Oil, vegetable	201,937	214,052	415,989
Oil, whale .....	.....	4,457	4,457
Oilseeds	236,138	61,089	297,227
Ore, alumina/bauxite	158,756	769,140	927,896
Ore, chrome	61,630	28,028	89,658
Ore, copper	28,407	1,036,602	1,065,009
Ore, iron	119,869	406,706	526,575
Ore, lead	5,200	182,256	187,456
Ore, manganese	140,329	130,426	270,755
Ore, tin	1,652	1,687	3,339
Ore, zinc	34,134	1,158,891	1,193,025
Ores, various	188,187	1,832,967	2,021,154
Paper and paper products	1,077,733	494,391	1,572,124
Peas, dry	3,002	53,454	56,456
Petroleum and products, various	312,958	247,312	560,270
Phosphates	8,354,058	227,215	8,581,273
Porcelainware	10,007	496	10,503
Potash	826,604	2,248	828,852
Pulpwood	1,517,764	2,272,333	3,790,097
Refrigerated food products (excluding bananas)	764,804	2,749,849	3,514,653
Resin	87,290	1,225	88,515
Rice	137,743	579,936	717,679
Rubber, manufactured	7,194	5,297	12,491
Rubber, raw	6,929	44,371	51,300
Salt	35,972	830,129	866,101
Seeds, excluding oilseeds	71,179	19,898	91,077
Skins and hides	736	120	856
Slag, clinkers, and dross	52,141	11,810	63,951
Soda and sodium compounds	31,393	601,504	632,897
Sorghum	1,946,648	.....	1,946,648
Soybeans	7,207,461	20,020	7,227,481
Sugar	1,449,647	1,885,254	3,334,901
Sulfur	7,605	2,596,076	2,603,681
Tallow	117,047	31,547	148,594
Textiles	8,206	6,933	15,139
Tobacco and manufactures	211	484	695
Toluene	157,301	937	158,238
Wax, paraffin	10,832	32,431	43,263
Wheat	5,434,844	2,188,512	7,623,356
Wool, raw	261	1,465	1,726
All other	617,397	657,246	1,274,643
Total	<u>96,845,771</u>	<u>62,426,847</u>	<u>159,272,618</u>

Other Statistics

Table 13.—Water Supply and Usage

	Fiscal year		Percent of usage Fiscal year	
	1992	1991	1992	1991
	(000's of Acre-feet)			
MADDEN AND GATUN LAKE WATER SUPPLY:				
Total runoff, Madden Lake Basin	2,033	1,788		
Evaporation from Madden Lake.....	<u>—35</u>	<u>—38</u>		
Available for Madden Lake usage	1,998	1,750		
Municipal water use Madden Lake	<u>—122</u>	<u>—120</u>		
Available for downstream usage	1,876	1,630		
Total runoff, Gatun Lake (area below Madden)	<u>2,449</u>	<u>2,401</u>		
Subtotal	4,325	4,031		
Evaporation from Gatun Lake	<u>—387</u>	<u>—418</u>		
Available for Gatun Lake watershed usage	3,938	3,613		
MADDEN LAKE WATER USAGE:				
Hydroelectric power	1,728	1,558	91	89
Leakage.....	15	14	1	1
Spillway discharge	44	52	2	3
Municipal	<u>122</u>	<u>120</u>	<u>6</u>	<u>7</u>
Total Madden Lake usage	1,909	1,744	100	100
GATUN LAKE WATER USAGE:				
Hydroelectric power	1,336	988	36	27
Lockages, Gatun and Pedro Miguel.....	2,082	2,123	57	58
Municipal and other usages	107	112	3	3
Spillway discharge	<u>154</u>	<u>429</u>	<u>4</u>	<u>12</u>
Total Gatun Lake usage	<u>3,679</u>	<u>3,652</u>	<u>100</u>	<u>100</u>

Table 14.—Dredging Operations—Fiscal Year 1992

	(Cubic yards)		
	Earth	Rock	Total
Pacific District (Auxiliary)	514,619	N/A	514,619
Pacific Entrance (Widening)	<u>2,138,465</u>	<u>N/A</u>	<u>2,138,465</u>
Grand Total	<u>2,653,084</u>	<u>N/A</u>	<u>2,653,084</u>

Table 15.—Electrical Power Generated

(Gigawatt hours)

	Fiscal year	
	1992	1991
Generation:		
Gatun hydro station	86	86
Madden hydro station	206	185
Thermal generating stations	357	333
Gross generated by Panama Canal Commission	649	581
Less station service usage	(16)	(14)
Net total generated by Panama Canal Commission	633	567
Power Purchases:		
Through interconnections from Panama	3	3
Net Energy received for Wheeling	6	5
Power Sales:		
Through interconnections to Panama	(104)	(42)
Net power generated and purchased for Canal area only	538	533
Other power generated by military for own use .....	....	....
Total Canal area requirements	538	533
Power distributed to Commission's customers	511	510
Transmission and Distribution losses	27	23
Peak load (thousands of kilowatts)	85.5	85.1
Date of peak load	April 8	June 12
Canal area load factor ²	72%	72%

¹ One gigawatt hour equal to 1 million kilowatt hours.² Total Canal area requirements divided by number of hours per year times peak load.**Table 16.—Fire Division Statistics**

	Fiscal Year 1992		Fiscal Year 1991	
	Number of fires	Property loss	Number of fires	Property loss
Panama Canal Commission ¹	41	\$ 48,219	70	\$ 17,654
Armed Forces ²	211	79,377	215	613,687
Private (including ships) ³	173	10,297	81	8,570,239
Republic of Panama ⁴	62	200	85	4,050
Total	487	\$138,093	451	\$9,205,630
			FY 1992	FY 1991
Total calls minus fires ⁵			7,220	6,068
Total number of calls (all types) responded to			7,707	6,519

¹ Figure includes \$35,000.00 fire loss of feeder switch cubicle # 714, Miraflores Power Plant.² This amount includes the \$18,000 fire loss at Bldg. 662, Howard and the \$14,900.00 fire loss at Quarters 46, Howard.³ Figure does not include the fire loss of MV "Ocean Sky." Data was unobtainable from vessel's agents.⁴ Responses made to areas reverted to the Republic of Panama but responded by Commission forces, such as grass fires, railroad fires, etc. . .⁵ Includes responses to all types of emergencies (ambulances and fire apparatuses).

UNIVERSITY OF FLORIDA



3 1262 05143 0006

